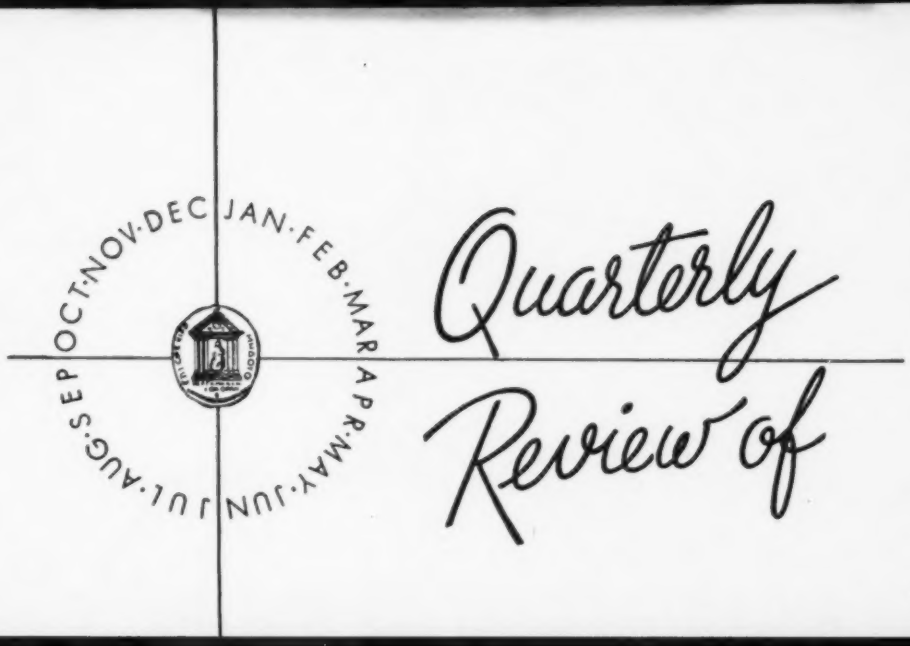
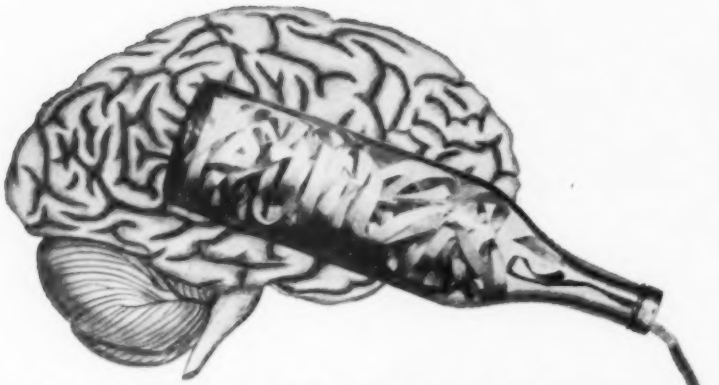


PSYCHIATRY AND NEUROLOGY

Winfred Overholser, M.D.
editor-in-chief

INTERNATIONAL RECORD OF PSYCHIATRY AND NEUROLOGY

VOLUME 6 NO. 4 OCTOBER 1951



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Simon, J. L. and Taube, H.: J. Nerv. and Ment. Dis., 104:593, 1946.

Levine, J., Rinkel, M. and Greenblatt, M.: Am. J. Psychiat., 105:429, 1948.

Shorvon, H. J., Rook, A. J. and Wilkinson, D. S.: Brit. M. J., 1300, Dec. 1950.

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Quarterly Review of

PSYCHIATRY AND NEUROLOGY

VOLUME 6 NO. 4 OCTOBER 1951

INCORPORATING INTERNATIONAL RECORD OF PSYCHIATRY AND NEUROLOGY

international board

The cumulative cross reference index for the 1951 Quarterly Reviews of Psychiatry and Neurology will be printed in the January 1952 issue.

FOREWORD

The purpose of the QUARTERLY REVIEW OF PSYCHIATRY AND NEUROLOGY is to present promptly brief abstracts, noncritical in character, of the more significant articles in the periodical medical literature of Europe and the Americas.

For readier reference, the abstracts are classified under the following general headings:

PSYCHIATRY

1. Administrative Psychiatry and Legal Aspects of Psychiatry
2. Alcoholism and Drug Addiction
3. Biochemical, Endocrinologic and Metabolic Aspects
4. Clinical Psychiatry
5. Geriatrics
6. Heredity, Eugenics and Constitution
7. Industrial Psychiatry
8. Psychiatry of Childhood
9. Psychiatry and General Medicine
10. Psychiatric Nursing, Social Work and Mental Hygiene
11. Psychoanalysis
12. Psychologic Methods
13. Psychopathology
14. Treatment
    - *a. General Psychiatric Therapy*
    - *b. Drug Therapies*
    - *c. Psychotherapy*
    - *d. The "Shock" Therapies*

NEUROLOGY

1. Clinical Neurology
2. Anatomy and Physiology of the Nervous System
3. Cerebrospinal Fluid
4. Convulsive Disorders
5. Degenerative Diseases of the Nervous System
6. Diseases and Injuries of the Spinal Cord and Peripheral Nerves
7. Electroencephalography
8. Head Injuries
9. Infectious and Toxic Diseases of the Nervous System
10. Intracranial Tumors
11. Neuropathology
12. Neuroradiology
13. Syphilis of the Nervous System
14. Treatment
15. Book Reviews
16. Notes and Announcements

In fields which are developing as rapidly as are psychiatry and neurology, it is obviously impossible to abstract *all* the articles published—nor would that be desirable, since some of them are of very limited interest or ephemeral in character. The Editorial Board endeavors to select those which appear to make substantial contribution to psychiatric and neurologic knowledge and which promise to be of some general interest to the readers of the REVIEW. Some articles, highly specialized in character or concerning a subject already dealt with in an abstract, may be referred to by title only at the end of the respective sections.

A section entitled INTERNATIONAL RECORD OF PSYCHIATRY AND NEUROLOGY is to be included at the beginning of the journal. The Record Section will consist of advanced clinical and experimental reports.

The Editorial Board will at all times welcome the suggestions and criticisms of the readers of the REVIEW.

WINFRED OVERHOLSER, M.D.
Editor-in-Chief

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Pity As Unconscious Disguise of Terror-Like Fear

Edmund Bergler, M.D.
NEW YORK, N. Y.

Analytic investigations of pity have produced two classic descriptions: Freud's statement that pity is based on unconscious identification, and Jekel's contention* that the emotion of pity arises from an unconscious demonstration by the ego of how it would like to be treated by its own inner conscience (superego), with the whole problem then being projected upon a subject in the outer world.

Both theories can be substantiated with clinical facts. Both have remained undisputed; and both represent psychological bull's eyes.

There exists, however, a third variety of pity, which has, strangely enough, not been described in the literature on the subject. This type consists of an unconscious, fleeting identification with a pitiable situation (or person), an identification so terrifying that the inner defense instituted is an attempt to outdistance that fear. The purpose of the defense is to demonstrate to the superego that one is not part and parcel of the unconsciously approved masochistic and dangerous situation, but an outsider and mere spectator whose only involvement is through the feeling of pity.

This third type could be called "pity as attenuated, terror-like fear." It pertains exclusively to one specific situation: psychic masochism of the greatest intensity. The allure of the masochistic situation which is to be imitated is, to some extent, the reason for the identification performed. The major reason is the reproach of the inner conscience, which points to the subject and declares, "That's you!" *To ward off the terrifying reproach of heightened psychic masochism, the unconscious defense of distance is utilized, and conscience is told, "No connecting link exists; I just pity the poor man."*

*"Psychologie des Mitleids," Imago XVI, 1930.

A coincidence of two facts brought this type of pity to my attention. I had just been writing a psychobiographical sketch of the poet Richard Savage*, using Samuel Johnson's famous sketch as source material, at the same time that I was analyzing a pathologically stingy patient, who, in spite of his stinginess, allowed "dependees" to take financial advantage of him.† The two experiences clarified each other and crystallized in my mind into the theory presented above.

Richard Savage was a chronic "supportee" who, according to Johnson, "appeared to think himself born to be supported by others, and dispensed from all necessity of providing for himself." His claim was allegedly based on his illegitimate birth; he claimed as his mother a noblewoman who denied any responsibility for him. Although Savage finally achieved a pension through a blackmailing drama called *The Bastard*, he provoked such conflicts with the donors of the pension that they were led to withdraw their support. He was also the recipient of a yearly pension from the Queen, which it was his habit to squander in a few days, to live in direst poverty for the remainder of the year. He would constantly ask his acquaintances "for small sums," which he never repaid except to provoke his benefactors.

What is the psychology of people who, as the cliché has it, "think the world owes them a living," and who, therefore, "never prosecute any scheme of advantage," as Johnson says of Savage?

In Savage's case, his discovery, at the age of seventeen, of the circumstances of his birth, provided him with a lifelong rationalization. He used that single fact remarkably well; he convinced himself, his friends, and his biographer. It makes for a good story, but unfortunately it doses not explain the facts. If Savage's exclusive aim had been to make up for past deprivations, he would have cultivated the benefactors who did appear to substitute for his absent mother. He did exactly the opposite: he provoked them all, quarreled with them, and alienated them in order to achieve his unconscious masochistic aim—*to be refused*. It was dangerous to help Savage, Johnson states rather naively:

> He was compassionate both by nature and principle . . . but when he was provoked (and very small offenses were sufficient to provoke him), he would prosecute his revenge with the utmost acrimony till his passion had subsided.
>
> His friendship was therefore of little value; for though he was jealous in the support or vindication of those whom he loved, yet it was always dangerous to trust him, because he considered himself as discharged by the first quarrel from all ties of honor or gratitude and would betray those secrets which in the warmth of confidence had been imparted to him. This practice drew upon him the universal accusation of ingratitude; nor can it be denied that he was very ready to set himself free from the load of an obligation; for he could not bear to conceive himself in a state of dependence, his pride being equally powerful with his other passions, and appearing in the form of insolence at one time, and of vanity at another.

Savage was of the opinion that he had to be supported by others, but he would not accept help unless it was offered with due ceremony. According to Johnson:

> Once, when he was without lodging, meat, or clothes, one of his friends . . . left a message that he desired to see him about nine in the morning. Savage knew that his intention was to

*Samuel Johnson's "Life of Richard Savage"—A Paradigm for a Type. The American Imago, 4:4, 1947. Partially reprinted in *The Writer and Psychoanalysis*, Doubleday, N. Y., 1950.

†*Money and Emotional Conflicts*, Doubleday, N. Y. 1951, chap. 7.

assist him, but was very much disgusted that he should presume to prescribe the hour of his attendance, and, I believe, refused to visit him and rejected his kindness.

Johnson mentions another typical example:

> Of the insolence that he was obliged to suffer he gave many instances, of which none appeared to raise his indignation to a greater height than the method which was taken of furnishing him with clothes. Instead of consulting him and allowing him to send a tailor his orders for what they thought proper to allow him, they [the "supporters"] proposed to send for a tailor to take his measure, and then to consult how they should equip him. This treatment was not very delicate, nor was it such as Savage's humanity would have suggested to him on a like occasion; but it had scarcely deserved mention had it not, by affecting him in an uncommon degree, shown the peculiarity of his character. Upon hearing the design that was formed, he came to the lodging of a friend with the most violent agonies of rage; and, being asked what it could be that gave him such disturbance, he replied with the utmost vehemance of indignation that they had sent for a tailor to measure him.

Johnson reports a third very similar example:

> At this time he gave another instance of the insurmountable obstinacy of his spirit: his clothes were worn out, and he received notice that at a coffee-house some clothes and linen were left for him; the person who sent them did not, I believe, inform him to whom he was to be obliged, that he might spare him the perplexity of acknowledging the benefit; but though the offer was so far generous, it was made with some neglect of ceremonies, which Mr. Savage so much resented that he refused the present and declined to enter the house till the clothes that had been designed for him were taken away.

Savage's friends finally decided to "support him by subscription," with the proviso that he leave London. As usual, Savage's reaction was provocative, and, as a result, some of the "subscribers" withdrew from the hopeless rescue work they had undertaken. Savage died in debtor's prison, into which he had maneuvered himself; when a friend wished to pay the small sum owing, Savage refused. Even in prison he found a "sucker"—the Warden—who provided for him.

The problem of the dependee poses two questions: what kind of personality becomes a dependee, and who are his supporters?

The dependee is an orally regressed neurotic, who regularly attains a position of dependence upon another person or group of persons, only to complain bitterly of the disappointment caused him by the "inconsiderate" attitude of the "stingy" provider. It is of no consequence to him that the provider never asked to be elevated to that position and rebels against the burden of it. The dependee needs him for two purposes: as a monetary donor, *and*—since he gives little, and that infrequently—as a provider of "injustices."

The dependee's rationalizations vary. They range from the ideologic, the artistic, and the cynical to "arguments" which are slightly paranoiac. The common denominator of them all is the motto: "Don't ask me why, the world owes me a living."

At first glance, one receives the impression that the dependent is an infantile "gimme" personality, repeating the child's receptive attitude. Clinical experience, however, specifically contradicts this impression. In early childhood, the "gimme" attitude is real enough. In adults, however, the similarity of these attitudes covers a genetic difference: it has gone through a masochistic elaboration and covers another wish, that of being *refused*. The problem of what constitutes the *clinically* visible contents of oral regression

is complicated, and has been dealt with at length in my books, *The Basic Neurosis* and *Neurotic Counterfeit—Sex.**

My first clinical experience with the "provider" type was with a young man of considerable inherited wealth, who had rather deprecatory ideas about the "less fortunate." Although he was entirely incapable of earning a decent living in the field of his specialized knowledge—his only interest was his hobby, numismatics—and in fact had never tried it, his attitude towards people who had to work for a living was one of contempt. He acted as if personal merit were a prerequisite to being born with a silver spoon in one's mouth. His contempt covered more than the typical defensive attitude; a good deal of infantile megalomania was involved, since he considered himself an "exception." Peculiarly enough, he did not think of himself as a wealthy playboy, but as a "hard-working perpetuator of family tradition." His fortune, originally amassed by his grandfather via rather dubious land-speculations, had been deodorized by his father with judicious donations and the establishment of a coin collection. "I am more than a coin polisher, as my malicious friends claim," said the heir ironically. "I know what I'm polishing." In terms of his own ability and training, his earning capacity was around $50 a week; he lived on ten times that amount.

Typically, he was rather stingy, or, as he expressed it, "conservative." What it amounted to was an inability to part with money for somebody else. In only one way was he a "sucker," as he called it; he could not resist dependees of the "fat" variety. What he meant was that human suffering of every sort left him cold, with the exception of "fat beggars." He cited an example: while seated in a Parisian cafe he observed a rather fat, middle-aged man making the rounds of the guests, soliciting a few sous. Nobody paid any attention to him or gave him a contribution; if he occasionally received a casual look, it was a look of indignation, as if to say, "With all that fat, you aren't starving." According to my patient: "A peculiar feeling of pity came over me; I thought that this might happen to me, too. Being rather stout myself, I imagined my own plight were I to lose my money. To my surprise, I gave the man 100 francs. I shall never forget the expression on the man's face—both grateful and surprised."

Analysis of the incident proved that behind the superficial narcissistic identification, which was fully conscious, a deeper layer was hidden. In addition to being a magic gesture, the gift represented a reproach of conscience, which pointed to an identical inner situation. In short, conscience accused him of harboring identical self-damaging masochistic traits, concealed in the patient, but clearly externalized in the beggar. To put himself beyond the reach of this reproach, the defense, "I *merely* have pity for him," is instituted.

Since the formulation of this clinical experience, I have observed this variety of pity again and again. It accounts for the opening of purse or checkbook by people who, under other circumstances, are quite incapable of making any such gesture on behalf of a stranger. It also accounts for the irrationality of the gift, which is frequently elicited under false pretenses with a fabricated "sob-story." The money paid or donated is truly

*Grune & Stratton, New York, 1949 and 1951, respectively.

"conscience money," but of a specific kind. It is not an appeasement of simple pity; it is, so to speak, "out-distancing" money. In the victim of frequently self-provoked misfortune, the average human being, whose ego is more intact, is confronted with a living example of psychic masochism, naked and unabashed. The inner conscience immediately makes the prospective donor aware of his own hidden recesses of masochism, and asks, "Are you really different from this man?" To counteract the implied reproach, the prospective donor puts into operation a mechanism designed to place him at a distance from the external example of masochism. The inner alibi runs something like this: "I am different; I have only pity for so much self-destruction." The whole internal dialogue is, of course, unconscious, but it has an outward manifestation in the form of a gift. At bottom, the gift is contributed as proof that the donor is not identical with the victim. Pity is but the covering cloak with which the donor unconsciously disguises his own psychic masochism.*

*See *Money and Emotional Conflicts.*

Reflections On Group Psychotherapy*

Louis Wender, M.D.
NEW YORK CITY

As director of a small mental sanitarium in 1929, in which only mild mental cases were treated, I noticed that a great many of the patients symptoms subsided and were not visible on the surface after they felt accepted in the small, circumscribed environment of the hospital. Their tensions and anxieties were minimized when they found that they were no longer living in hostile surroundings and that they could express themselves freely and be understood by fellow patients. These were patients who had developed neurotic reactions and borderline mental conditions because of a failure to adjust to the world of reality. Here, they found that they were able to mix with fellow patients in all sorts of activities and express themselves freely without being censured. Thus they received ego gratification on a superficial level in a small group.

It was felt that if they could respond to the phenomena of group interaction, they could be helped considerably; that is, if this group could be given psychoanalytic psychotherapy in which the dynamics of group interaction, of identification and transference, were utilized, much might be gained. It was not our purpose to treat these people *en masse* or as a time-saving device. This type of treatment was used to encourage the patient to express himself freely; it was felt that their free association would produce the flow of unconscious material, whereby the leader, with the help of the other patients, could act as therapist in the group, interpreting the psychodynamics of the total personality structure and the reactions of the patient to environmental stress, the patient gaining enough ego strength to face reality in life. It was felt that a psychoanalytic approach should be used in group psychotherapy as it was in psychotherapy and that the methods of coercion and inspiration should be disregarded; we felt that the group therapies in which a didactic approach was used were of no real curative value.

The basic concept of group psychotherapy is predicated on the idea that the individual develops in a group, namely the home. At first, the parents constitute the group, but as the child grows older, his siblings, neighbors, associates, and marital partner form a larger constellation. It was somewhere in this environmental setting that the individual was warped emotionally, resulting in the later abnormal reactions to life situations. He is, therefore, afraid of groups—reality—and it is conceivable that the proper place to start disentangling him emotionally is in an environment similar to that in which he was traumatized. Although it is *possible* that the person with a neurotic personality who is emotionally immature and possessed of a weak ego structure may respond to suggestion, inspiration, and coercion, he may, on the other hand, attempt to identify himself with the group leader in an effort to compensate for his inner ego

*Read before the Medical Society of St. Elizabeths Hospital, Washington, D. C., April 6, 1951.

weakness. This does not constitute a cure for he continues to carry on his sibling rivalries and other emotional difficulties; he does not grow up to maturity.

We frequently see the emotionally immature with weak egos, the frustrated individuals who have failed to obtain ego gratification and libidinous satisfaction manipulated by pseudo-leaders within a larger social group. This phenomenon can be seen in some of our social revolutions where the weak and hungry are promised comfort, justice, and equality. Frustrated individuals who have failed to find any ego expression attempt to gain libidinous satisfaction by following the inspiration of a leader and identifying themselves with him, hoping to attain their goals through him. As the group gets large, it loses its boundaries and its discipline and frequently becomes a mob. The phenomenon of group suggestion and identification similarly operates in religious revivals where, through suggestion and identification with a leader, religious enthusiasm develops within the group. There is usually discipline in the religious revivals, however, and no mob violence occurs, although if one studies the history of the Crusades, a mob reaction can be seen to have taken place there.

The psychopathology of these group phenomena centers about the problem of the weak, immature person who is looking for a place in the sun, wanting some ego satisfaction and gratification; because they still retain an infantile ego structure, these people respond to the fancy uniforms, the fanfare, and the ceremony, which act like a hypnotic spell on them. It is a biologic phenomenon of the weak and the "strong" that the weak will always look to the "strong" for protection and the "strong" will always look to the weak to dominate, achieving some aggrandizement through them. This phenomenon of the "strong" and the weak probably underlies the psychologic interpretation of the herd instinct formulated by McDougall, who defined it as an instinctive social process.

In group psychotherapy we make an endeavor to treat the weak, namely those with emotionally immature personalities, not by using methods of suggestion or inspiration but by using a psychoanalytic understanding of group interaction. Because the groups are small, individuals are able to release repressed inner conflicts and to express drives without fear of being punished. The patient learns of his immature behavior by listening to others; he does not depend upon the leader nor is his ultimate goal to imitate the leader, as is true in other group phenomena. Group psychotherapy is an attempt to teach the person to live in a group, to grow up emotionally in a small group so that he can live later in a larger group. Because we treat people in groups who are emotionally immature, with weak ego structures, or people who have developed borderline mental states or character difficulties because they were emotionally traumatized in their environmental constellation, it is necessary that the leader of the group in psychotherapy should not be an inspirational leader or a didactic teacher. He should be well-integrated himself, well-versed in the psychopathology of human behavior, and able to conduct a psychoanalytically oriented group, using a detached approach. He should be an understanding surrogate father, through whose guidance the immature person or neurotic may find his way to normalcy. The patient should be able to express himself freely within the group—his hostilities, frustrations, inhibitions, and prohibitions. He should be able to release his aggressiveness, as well as his love feelings, wthout being censured. Because group psychotherapy bears relationship to psychoanalysis, free association is encouraged; for the same

reason, it is also possible that resistances may develop. The only difference is that the transference and the resistances in such groups are not directed at the therapist and, if they are, are not very marked because they are dispersed and variable in character. These patients find themselves among their own and sooner or later are able to express their aggression—perhaps an expression of an old unconscious hostility to the father—without fear, directly to the therapist. The patient learns to assume a role in the group without fear of being punished or censured; he does not have to imitate the group leader because in group psychotherapy the leader of the group is neither a bombastic orator nor the hero type.

Group psychotherapy can not only be used intramurally to treat neuroses and borderline patients but can also be used extramurally. Living in a world of reality, we begin to doubt who is normal and who is abnormal. The borderline between normal and abnormal is very fine and, no doubt, a great many people could be helped by receiving group psychotherapy without actually having a frank neurosis. It could be used to assist school teachers who have to handle problem children, or mothers who have to deal with neurotic or delinquent children, or in marital situations, prisons, orphanages, or homes for delinquents.

Living in a group is both an art and a science; if we could only teach people how to live in groups, that is, in family constellations, showing them how to accept a certain amount of libido and to return as much or more than is received, which is the adult mode of behavior, this world would be a better place in which to live. Or, to put it differently, the whole process of living, of adult existence, involves exerting effort and energy for which we obtain libidinous satisfaction. It is possible to learn this process in group psychotherapy. A person can learn to live, to accept attention from his leader and from co-patients, depending upon how much effort he gives to the process of growing up. Although it is not the sole purpose of group psychotherapy, the participants do learn to live with their neighbors. Perhaps what is called "brotherhood"—how to live with one another—is a process of balancing, of give and take, of tolerance for a weaker individual. One does not elevate a man through sympathy and benevolence but rather by permitting him to express himself and develop his own ego freely and without censure. I.Q.'s have very little to do with this.

The technic of group psychotherapy has to be elastic; it will depend upon the cultural background of the individuals being treated, the types of abnormalities they present, and the problems they pose. Basically, it must be psychoanalytically oriented. Society has frequently misused the phenomena of leadership and group interaction; psychiatrists, who have some understanding of human behavior and unconscious drives, must make an effort to utilize the possibilities of group psychotherapy, not only for treating the abnormal but also the so-called normal people of this world.

Five Years of Private Psychiatry*

James L. McCartney, M.D., F.A.C.P.

GARDEN CITY, N. Y.

During the five years from December 1945 to December 1950, 2,531 patients were referred for neuropsychiatric diagnosis and treatment. Of these, 911 (36 per cent) were adult males, 1,113 (44 per cent) were adult females, and 507 (20 per cent) were minors under 18 years of age; of the latter group, 227 (9 per cent) were males and 280 (11 per cent) were females. Ministers referred 15 (0.6 per cent), schools 173 (6.8 per cent), attorneys 23 (0.9 per cent), the courts 83 (3.3 per cent), the Veterans Administration 85 (3.4 per cent); 2,076 patients (82 per cent) were referred by 219 local physicians, while 76 (3 per cent) were self-referred.

Diagnosis of 2,076 Patients Referred by 219 Physicians

	Number	*Percentage*
Schizophrenia	280	13.5
Paranoia	52	2.5
Psychopathic Personality	21	1.0
Manic-Depressive Psychosis	135	6.5
Involutional Melancholia	42	2.0
Reactive Depression	187	9.0
Arteriosclerotic Psychosis	31	1.5
Toxic Psychosis, Barbital, etc.	52	2.5
Alcoholism	42	2.0
Epilepsy	21	1.0
Mental Deficiency	10	0.5
Neuropathology	31	1.5
Glandular Dysfunction	10	0.5
Obsessive-Compulsive Neurosis	114	5.5
Anxiety Neurosis	664	32.0
Conversion Hysteria	239	11.5
Marital Maladjustment	135	6.5
Sexual Perversion	10	0.5

Seven hundred and sixty-seven patients (33 per cent) were treated with either instantaneous electric shock (ES), electronarcosis (EN), glissando with electroshock, or minimum stimulus (MS), either with or without preliminary intravenous injection of sodium pentothal, Delvinal, or Seconal. The type of electrical treatment was fitted to the individual patient.

*Presented before the Annual Meeting of the Medical Society of St. Elizabeths Hospital, Washington, D. C., April 6, 1951.

The depressions generally required between four and 10 treatments, while the schizophrenics and conversion hysterias required between 10 and 20 treatments. Mechanical restraint was not necessary with such treatment and was better not used. Schizophrenics may become excited in the 15 minute postshock period and so are best handled by prior sedation with sodium pentothal. The depressions and neuroses are better handled without prior sedation unless there is acute anxiety, extreme tenseness, and excessive musculature. Higher voltage is necessary to set off the convulsion if sedation is used. Where the patient complains of nausea following the first shock treatment, 100 mg. dramamine, given before the treatment, will prevent this symptom.

Shock machines deliver an alternating current with a range of 200 to 1,000 milliamperes, with the machine marked to deliver 0 to 140 volts at an 0.1 to 0.6 per second rate. Usually, 100 to 140 volts were required to set off a convulsion (with a sudden jackknife contraction); 1,166 treatments were given with these machines with very good results. Of the 1,166 treatments only three resulted in spinal fractures (0.25 per cent), and only one required a cast. There were no fractures of long bones but frequent complaint of post-treatment muscular soreness. When glissando was used prior to the convulsive shock, the convulsion came on more smoothly and the soreness and possibility of fracture was reduced. Glissando has been used in all electroshock cases for the last two years, a total of 1,759 treatments. No fractures have resulted. One woman of 58, in profound depression and known to be a poor risk, died during her first shock. If 2 to 6 minimum jolts of 10 or 20 volts each are delivered at 0.1 second intervals after the convulsion, the patient has less apnea and cynosis and is likely to relax better after the treatment.

If the schizophrenic does not respond to shock (ES), then electronarcosis (EN) may yield the desired results, but the risk appears greater. Here, up to 500 milliamperes is used. The current is introduced by glissando, and usually at least 200 milliamperes are needed. Generally, ten or more treatments are needed with electronarcosis after the prior electroshocks series. This technic seems to be a good substitute for insulin shock, which we have not administered as an ambulatory procedure. Only 4 cases in five years did not respond to one or another form of electric treatment and were given insulin shock after commitment to a hospital. The electronarcosis technic was used in 10 patients with remission of symptoms.

Since May 1950, a new technic has been available. This is known as minimum stimulus (MS) and is given by the Reiter Electrostimulator - CW47. A small amount of current, 2 to 4 volts, is passed through the midbrain rather than through the temporal lobes. This technic has many advantages over the higher voltage. A convulsion may be set off at 15 to 20 milliamperes at position 3, but there is less post-treatment amnesia and confusion than with electroshock. There is also less danger of fracture or muscle soreness. Immediately after the convulsion, the current is turned down to 1.5 to 2.5 milliamperes at position 1, and the vital centers are rhythmically stimulated. At first it was thought best to give prior intravenous sedation, but this does not appear necessary, except as indicated for electroshock. This therapy was given 587 times; 403 were with prior sedation and 184 were without sedation. During the same period that these 587 minimum stimulus treatments were given, electroshock with glissando was given

326 times. No fractures resulted from these 913 treatments.

Minimum stimulus offers an advantage in that the respiration and cardiac centers are stimulated, and so apnea and circulatory embarrassment does not occur. Also, this technic may be used, with or without oxygen, to treat suffocation or barbital poisoning. On two occasions we used this treatment, with success, in suicide attempts.

Music was used with many of the electric treatments, especially if the patient expressed an interest in music. It was evident that, in many patients, the playing of symphonies and lullaby music helped them to relax and to reintegrate themselves following the convulsion.

Whenever possible, after the electric treatment was completed, the patient was followed up with psychotherapy for at least two weeks. It should be noted that in the hour following the administration of the current, which disintegrated the patient, he reintegrates himself, and during this period he is especially susceptible to constructive suggestion and other forms of psychotherapy. This treatment is usually overlooked in the hospital routine because the therapist needs to sit by the patient during the recovery period and seize every opportunity to direct the patient's reintegration.

Two per cent of the referrals were treated with narcosynthesis, one per cent were treated with hypnosis alone, 24 per cent were treated with short forms of psychotherapy alone, while 24 per cent were given psychotherapy in the form of psychoanalysis, and 6 per cent were treated with psychotherapy and an indicated diet or medication, such as corticosterone, thyroid, benzedrine, or vitamins. Seven per cent had their treatment terminated by six sessions of group therapy, of two hours each. In these sessions the spouse, fiance, or parents of the patient were invited to attend with the patient. Of the couples referred, 82 underwent individual psychotherapy.

Totalling the visits for all of the patients referred, each made an average of 14 visits before being discharged back to the referring physician, although many patients only required one or two visits. In cases of marital maladjustment, many required less than four visits and the reading of a reasonable book on the subject. *The Drama of Sex*, written by the author and published in 1946, was used for this purpose.

Therapeutic analysis required between 30 and 60 hours for each patient. Some patients needed up to 100 or more hours to help them to adjust a disturbed personality. When analytic resistance was encountered, it was found that two or three electric treatments would break down this resistance. This technic is as effective as narcosynthesis or hypnosis and is more easily administered. Marked transference may follow the disintegration which follows electric dissociation.

ABSTRACTS

psychiatry

ADMINISTRATIVE PSYCHIATRY AND LEGAL ASPECTS OF PSYCHIATRY

See Contents for Related Articles

ALCOHOLISM AND DRUG ADDICTION

Psychological Effects of Chronic Barbiturate Intoxication. C. H. KORNETSKY, Lexington, Ky. Arch. Neurol. & Psychiat. *65*:557-67, May 1951.

Five former morphine addicts who volunteered for the experiment were given sufficiently large doses of secobarbital, pentobarbital, or amobarbital to induce continuous mild to severe intoxication for periods of from 92 to 144 days. The Digit-Symbol, Bender-Gestalt, and Draw-a-Man tests were administered every three to seven days; the Rorschach, Stanford-Binet, and Kohs Block tests were administered only during specified periods of the study. In all but one subject, the routinely administered tests revealed a quick decline in efficiency of performance followed by an increase which became maximal 30 to 70 days after the start of continuous medication. Qualitative and quantitative differences in the effects of barbiturates on different individuals were found, and the same dosage of a barbiturate affected the same individual differently on different days. Also there was partial loss of ego control which was manifested by a greater magnitude of pathologic personality projection in the projective technics used. When the administration of barbiturates was discontinued, convulsions, or psychosis, or both developed in all subjects. Following this, the performance of the subjects quickly reverted to the pre-addiction level, and no evidence of residual physical damage could be detected. Rorschach examinations obtained during barbiturate withdrawal psychosis were quantitatively and qualitatively different from those obtained during the other periods of the experiment. It was observed that the pre-addiction Rorschach patterns of the periods of the experiment. It was observed that the pre-addiction Rorschach patterns of the 3 subjects who developed major psychosis after abrupt withdrawal were characterized by constriction, with a lack of fantasy or affective responsiveness. In the other 2 subjects, constriction was absent and percepts relating to affect and fantasy were present. These findings are discussed with reference to the susceptibility of certain personality types to the development of psychosis in reaction to the stress of barbiturate withdrawal. 16 references. 2 figures. 5 tables.—*Author's abstract.*

Psychotic Reactions During Tetraethylthiuram Disulfide (Antabuse) Therapy. A. E. BENNETT, L. G. MCKEEVER, AND R. E. TURK, Berkeley, Calif. J.A.M.A. *145*:482-84, Feb. 17, 1951.

In a series of 37 patients treated for chronic alcoholism by tetraethylthiuram disulfide, 6 showed transient psychotic reactions. Earlier reports have not described this complication, and, therefore, should be noted when evaluating the new therapy. General treatment procedures and precautions accorded with those outlined by Glud have been reported in the authors' earlier paper on this subject.

In the 6 cases of severe psychotic reaction, 5 patients were unable to continue treatment. In 2 cases paranoid reactions appeared. In 4 cases the psychoses developed within three weeks after the drug alone had been given, and in the other 2 after ingestion of alcohol following use of the drug for about two months. In 5 cases there was evidence of liver damage and in 4 of organic brain damage prior to therapy. In only 1 case could therapy be reinstituted successfully.

The psychotic reactions are explained on an organic basis. The action of tetraethyl thiuram disulfide may reduce the oxygen consumption of nervous tissue and interfere with metabolism sufficiently to precipitate an organic psychotic reaction in patients who are barely compensated. This could be expected in patients with evidence of liver dysfunction or previous organic brain damage or both. In past months, in about 50 carefully selected patients, the initial dose before test reactions has been reduced by about 1 to 2 Gm., and the maintenance dose has also been reduced slightly. This reduction appears to have prevented psychotic reactions. It is recommended that all patients treated with tetra-ethylthiuram disulfide should be watched carefully for delirious reactions, especially if liver dysfunction or preexisting organic brain damage is suspected. 5 references.—*Author's abstract.*

Therapeutic Results and Clinical Manifestations Following the Use of Tetraethylthiuram Disulfide (Antabuse). G. P. CHILD AND W. OSINSKI, Albany, N. Y., R. E. BENNETT, Trenton, N. J., AND E. DAVIDOFF, Schenectady, N. Y. Am. J. Psychiat. *107*:774-80, April 1951.

Tetraethylthiuram disulfide (Antabuse) has been used for two years as an adjunct in the treatment of chronic alcoholism. The Antabuse interferes with the complete oxidation of alcohol by blocking the active centers of certain liver enzymes. Three hours after an effective dose of Antabuse, this blockage is complete and persists for a period from 4 to 15 days. A small maintenance dose each day perpetuates the inhibition of alcohol oxidation. A person or animal thus treated with Antabuse is sensitized and reacts vigorously to a small drink of alcohol. The partly oxidized alcohol, mainly acetaldehyde, produces many signs and symptoms among which are redness, warmth, rapid heart, rapid and difficult respiration, dizziness, fatigue and sleep. This "allergic" reaction prevents further drinking for that period.

Animal work demonstrated that, when given in small amounts, Antabuse has virtually no toxic effects. In humans who have been taking Antabuse for almost one year, blood, liver, and kidney tests have shown no abnormalities. One hundred and

twenty patients were treated in this series. They were all given a test dose of alcohol after Antabuse priming. The test was performed in the presence of their mate or a close friend who imbibed the same small amount of alcohol, without previous Antabuse treatment. The test warned the patient of the uncomfortable reaction which would occur if alcohol were imbibed while on Antabuse. The patients were seen every two to four weeks for psychotherapy, general evaluation, and discussion. They were encouraged to join Alcoholics Anonymous and to use their newly gained time to good advantage.

About 10 per cent stopped the Antabuse immediately and never returned. Of the remainder, 74 patients were still improved after nine months. Of 25 patients followed for 15 months, 13 had slipped and the others were improved.

Antabuse in the hands of one acquainted with its limitations and willing to spend considerable time in following a small number of patients is a valuable adjunct in the management of chronic alcoholism. 11 references. 7 tables.—*Author's abstract.*

BIOCHEMICAL, ENDOCRINOLOGIC, AND METABOLIC ASPECTS

See Contents for Related Articles

CLINICAL PSYCHIATRY

Gestation Psychoses. RUTH JAFFE, Ramat Gan, Israel. Harefuah *40*:81-82, March 15, 1951.

Out of 1,000 admissions in the course of nearly 5 years, our statistics show that 71 cases, or 7.1 per cent, were gestation psychoses, constituting 11.6 per cent of all female admissions, a much higher percentage than has formerly been published in international statistics.

Specific psychoses of pregnancy do not exist. The fact of pregnancy has a pathoplastic rather than a pathogenetic effect. The same applies to lactation psychoses which are also endogenous. They, however, are more frequent than pregnancy psychoses, but this difference is not ascribed to lactation itself. As additional precipitory factors we consider: (1) hormonal changes with the return of menstruation, (2) physical and psychic exhaustion due to overexertion at the time of birth and in connection with lactation, and (3) difficulties of adaptation to the new task of motherhood.

In some of these cases we found traces of mental confusion in the clinical picture. A satisfactory explanation of this feature could not be found, but attention should be drawn to the fact that in all these cases the cessation of nursing was sudden instead of gradual, producing sudden hormonal changes.

There are specific puerperal psychoses. These develop as a result of the simultaneous occurrence of several factors at the time of birth, such as inferior constitution, increased anxiety, psychic traumata, or physical complications. As the exogenous factors are of greater weight and importance than the constitutional ones, it is not surprising that puerperal psychoses show all the manifestations of the exogenous psychoses and offer a relatively favorable prognosis as well. There exists an inclination to relapses at subsequent births.

Our cases reacted well to all forms of shock therapy.—*Author's abstract.*

Prognosis in Topectomies and Lobotomies Relative to Body Type. NATHAN S. KLINE, Worcester, Mass. and ASHTON M. TENNEY, Shrewbury, Mass. Arch. Neurol. & Psychiat. *65*:323-25, March 1951.

In 1947 a series of operations designated as "topectomies" were performed on a group of chronic schizophrenic patients at the New Jersey State Hospital, at Greystone Park. The topectomies consisted of selective partial ablations of the frontal lobe and have been reported in full detail. A portion of the patients did not have topectomies but served as controls. Subsequently, a number of these controls, as well as some of the topectomized patients who failed to improve, were lobotomized. Somatotype studies on all patients were done under the direction of Dr. William H. Sheldon.

We have recently reported on finding statistically valid relations between prognosis and somatotype in a series of some 450 consecutive schizophrenic patients admitted to a Veterans hospital, so that a natural curiosity existed as to the relation of prognosis to body type in the patients of this Columbia-Graystone I project. Data on 29 of the 30 male patients were complete.

If comparisons are made between the dominantly mesomorphic type and other body types, as would be indicated by our previous study, the evidence favors the conclusion that mesomorphy is related to favorable prognosis, since the differences noted are at better than the 2 per cent confidence level (chi-square of 5.6). Mesomorphs had more favorable results, regardless of operative procedure (or lack of it).

If the patient subjected to either a topectomy or a lobotomy is not a mesomorph, the prognosis for a favorable outcome is less than 1 in 10. Of the 13 nonmesomorphs operated on in our series, only one was discharged. On the other hand, 4 of the 5 mesomorphs in our series who had either lobotomy or topectomy have been discharged; the remaining patient with lobotomy was on trial visit but has been, at least temporarily, returned to the hospital. The use of psychosurgical procedures on nonmesomorphs should be undertaken with caution. 4 references. 2 tables.—*Author's abstract.*

An Acute Psychosis Developing During Therapy with ACTH. J. A. FRANK, Denver, Col. Am. Pract. *2*:400-402. May 1951.

A 22 year old male with moderately severe rheumatoid arthritis developed an acute psychosis after receiving a total of 18.9 Gm. ACTH over a period of 29 days. The psychosis resembled that seen following the excessive intake of alcohol or other toxic substances and was classified as an acute toxic delirium. The acute psychosis lasted for about one week, after which the patient rapidly regained mental clarity and showed good insight and memory. He was seen about one month after leaving the hospital, at which time he stated that he felt well except for a slight stiffness of his fingers; he showed no mental symptoms. Individual thresholds of sensitivity to ACTH vary widely, and, according to the literature, toxic psychic manifestations following the use of this drug are rare. It is to be expected that with the continued widespread use of ACTH, such acute psychotic reactions will be more commonly observed. 4 references. 1 table.—*Author's abstract.*

Sexual Behavior After Lobotomy. JULIUS LEVINE AND HAROLD ALBERT, Boston, Mass. J. Nerv. & Ment. Dis. *113*:332-41, April 1951.

A series of 40 patients was interviewed at intervals of six months to four years after lobotomy for the purpose of determining changes in sexual behavior. Evaluation was difficult because of the unknown effects of long hospitalization and long duration of illness.

In 4 patients, sexual behavior after operation was such as to involve them in social difficulties. One patient has been a sexual psychopath before the onset of her phychosis, with a return to promiscuous behavior after operation. Two patients who remianed phychotic after operation were in constant difficulty because of their unbridled sexual verbalizations. Only 1 patient became a social problem after operation who had not been one before operation. Homosexuality did not arise anew after lobotomy in any of the series. Two patients who had had troubling homosexual fantasies preoperatively were completely relieved of these fantasies postoperatively. A third patient retained his homosexual fantasies after operation with minimal guilt and no anxiety and did not act out his fantasies. Although there were many variations in the form of sexual expression, the predominant prelobotomy mode of sexual activity was maintained after lobotomy. A decrease in feelings of guilt, modesty, and anxiety in connection with sexual activity was a striking phenomenon. This was more apparent in terms of personal restraints, such as shame and abasement, than in social restraints.

On the basis of the subjective report of the fantasy-life of the patients, it can be assumed that fantasies are impoverished after lobotomy. In 15 patients, fantasies became less frequent and less vivid. Twenty-three denied fantasies, and only 2 patients described them as being more vivid. Several patients reported dreams after operation. Two patients reported dreams with manifest sexual content. The degree of pleasure derived from sexual practices was reported by 20 patients; one felt there was no change in his enjoyment of sex, 12 had less pleasure, and 7 had more. Patients who were apathetic and lacking in spontaneity usually had decreased sexual interest. However, no clear-cut correlations could be made between sexual functioning and the independent appraisals made by another group of workers as to the work adjustment, community adjustment, and over-all clinical picture after lobotomy.

In general, patients and relatives reported that preoperative moral, social, and religious attitudes continued to operate after lobotomy, even though there was a reduction in guilt, modesty, and embarrassment in association with sexual activity. 8 references. 1 table.—*Author's abstract.*

Psychiatric Teamwork — An Integrated Therapy. E. BOGEN TIETZ AND M. GROTJAHN, Los Angeles, Calif. J.A.M.A. *145*:1055-59, April 7, 1951.

Although psychoanalysis has proved to be a valuable tool in the understanding and treatment of mental disorders, Sigmund Freud has pointed out the limitations of psychoanalysis in the treatment of the psychoses, particularly shizophrenia. Investigators have found it possible to establish contact with psychotic patients and develop transference reactions in them, but the risk involved in suicidal patients, the danger

of uncovering the unconscious in patients with impaired integrative ego-functions, and the impossibility of affecting phychotic defenses without releasing overwhelming anxiety, have proved a serious handicap in the use of an unmodified analytic approach.

The electrochemical therapies, especially electronarcosis, seem to offer help in this situation. With the use of these therapies, suicidal activities are diminished, the patient develops a sense of well-being, and, most important, the return in the direction of normal reality contact, with a lessening of the overwhelming anxiety, seems to be made possible. In this condition, the patient may be reached psychotherapeutically. Occasionally, decompensation may necessitate maintenance treatments. Patients heretofore resistant to psychotherapy may, after a course of electronarcosis, become accessible and able to utilize psychoanalytic insight.

Treatments are carried out in an ambulatory unit where, in a carefully planned, neutral, pleasantly relaxed environment calculated to reassure and please patients, a team of doctors, psychotherapists, psychologists, social workers, nurses, and teachers pool their efforts for the benefit of each patient. When necessary, a short period of hospitalization is available.

It is only with intensive utilization of what we have learned and the constant addition of new ideas that we can attain the integrated treatment program essential for the care and cure of the psychiatric patient.—*Author's abstract.*

GERIATRICS

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HEREDITY, EUGENICS AND CONSTITUTION

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INDUSTRIAL PSYCHIATRY

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PSYCHIATRY OF CHILDHOOD

The Inadequacy of Present-Day Concepts of Mental Deficiency and Mental Illness in Child Psychiatry. C. E. BENDA, M. J. FARRELL, AND C. CHIPMAN, Waverly, Mass. Am. J. Psychiat. *107*:721-29, April 1951.

Present-day child psychiatry is based on a strict division between so-called "mental deficiency" and the emotional disorders and psychoses of childhood. This dichotomy cannot stand criticism considering the progress made in our knowledge of the clinical aspects and pathology of mental deficiency. Research in mental deficiency, carried out over a period of 15 years, has produced conclusive evidence that the severe forms of mental deficiency, the so-called "idiots" and "imbecilies," suffer from an "organic brain syndrome." All the severe conditions of mental deficiency are due to factors which interfere with the proper development and functioning of the nervous system.

A large number of disorders are prenatal in nature; some of them are genetic, but a large number are due to noxious factors operating during the period of gestation which interfere with the proper development of the nervous system. Another large group of cases of severe mental defect (about 35 per cent) are due to various types of injury at birth, either of the nature of trauma or asphyxiation. Other types of "organic brain syndrome" are of an infectious or metabolic character. To exclude the "organic brain syndrome" from general child psychiatry would be the same as to exclude the senile and arteriosclerotic conditions, general paresis, Huntington's chorea, and brain traumata from adult psychiatry and restrict psychiatry to psychoneuroses or those psychoses in which the brain is supposedly not affected.

The so-called "higher" form of mental deficiency, composed of the "feebleminded" or morons, consists of several different types, of which three main types can be distinguished:

1. Normal minus variations within three times the standard deviations;
2. Genetic oligoencephaly;
3. Accidental cases, due to trauma, infections, metabolic disorders, or emotional disturbances.

While the last of these three groups is composed of the less severe clinical forms, seen in the imbeciles and idots and are, therefore, also cases of the "organic brain syndrome," the oligoencephaly or oligophrenia proper represents a genetic problem in itself. Oligoencephaly is a morbid entity, the diagnosis of which is a medical neuropsychiatric problem like any other type of mental disorder.

The present sharp distinction between mental disorder and mental deficiency is, therefore, not tenable. It makes it difficult to offer children with mental disorders the benefits of a state institution as they are not eligible on account of mental illness, and it neglects the clinical types of mental deficiency in creating an impression that these patients are not problems of neuropsychiatric diagnosis, treatment, and care. It is suggested that a new type of hospital-school be created in which the emotional, neuropsychiatric, and medical needs of these patients can be taken care of, at the same time, making available proper means of education and recreation. It is also necessary to create facilities for chronic custodial cases so that they do not take schooling and training facilities away from promising cases which are in urgent need of admission and training. 19 references. 1 figure.—*Author's abstract.*

Childhood Schizophrenia and Mental Deficiency. B. W. RICHARDS, St. Albans, England. J. Ment. Sc. *97*:290-312, April 1951.

It has been suggested by a number of authors that some patients in mental deficiency institutions are suffering from childhood schizophrenia, in the absence of original mental defect. Despert states that "It is possible that they are brought to the attention of the qualified psychiatrist only at the stage in which they appear to be feeble-minded rather than psychotic."

The present investigation is confined to patients who, without original intellectual defect, have developed schizophrenia during childhood and been ultimately disposed of to a mental deficiency institution. Patients have been selected by clinical observa-

tion and, therefore, any who are clinically indistinguishable, a possibility referred to by Kraepelin, are not represented. Except in a few outstanding cases, idiots are also excluded because of the great difficulty of differential diagnosis.

The conclusions are based on 22 cases. Of these, 16 (12 male and 4 female) are considered certain examples and 6 possible examples of uncomplicated childhood schizophrenia. Of 6 patients who could be tested on the Wechsler-Bellevue scale, 5 had intelligence quotients between 80 and 100. A selection of 10 cases is described in some detail.

The typical form of childhood schizophrenia is that of schizophrenia simplex, with all-round reduction of activities and interests, and loss of affective contact and social integration. Such patients, although unemployable and in need of care in an institution, may remain accessible, attend to their immediate physical needs, and be able to cooperate in mental testing for years. One patient had not demented in 40 years. In a minority of cases, catatonic, hebephrenic, or paranoid features were present, the last not appearing until adult life. It is likely that catatonic and hebephrenic symptoms are of unfavorable prognostic significance.

The age of onset does not allow one to predict the outcome. One patient who developed symptoms at 5 years of age now at 18 is hopelessly inaccessible. Another developed symptoms at 3-4 years but is testable and has an I.Q. of 85 (verbal 104, performance 67). Age acts powerfully as a limiting factor, for the psychotic process can only grasp what mental functions are in being at the time. The effect of early onset extends into adult life, for the reduction of drive, ambition, and interests considerably narrows the sphere of social integration, thereby reducing the subject matter and the themes that would otherwise have been available for psychotic elaboration.

The degree of dementia and the degree of mental defect are determined at least as much by the intensity of the disease process as by the age of onset. The type of symptoms may also be of prognostic significance, hebephrenic features and psychomotor disorder being unfavorable.

Analysis of mental results reveals a superior verbal to performance achievement and considerable interest scatter. The psychometric pattern is in accord with the findings of other workers, but is probably not of much value for differential diagnosis in a mental deficiency institution.

Hereditary loading was present in a number of cases. There was no family history of mental deficiency. 19 references.—*Author's abstract.*

PSYCHIATRY AND GENERAL MEDICINE

Electrocardiographic Abnormalities in the Mentally Ill. Is "Myocardial Damage" Sometimes of Psychogenic Origin? SAMUEL G. PLICE AND CHARLES W. PFISTER, Chicago, Ill. Illinois M.J. *99*:212-217, April 1951.

It is common sense to evaluate the circulatory system before subjecting it to severe strain such as is encountered in electroshock therapy.

Electroshock produces an increase in blood pressure and pulse and perhaps serious cardiac arrhythmias. We are not certain, however, that shock therapy may not produce

reflex vagal stimulation of some hearts, with decreased rate and even asystole. Both mechanisms may be operative when fatal reactions ensue.

Of the patients treated with electroshock, some with serious organic heart disease would have been considered poor surgical risks on that basis. Yet all survived electroshock therapy and many were benefitted by it.

Where cardiac consultation is not available, great reliance is placed upon the electrocardiogram as a short-cut to appraisal of the cardiovascular system. The report "Myocardial Damage" is not at all helpful to the psychiatrist. Many patients, we believe, are denied the benefit of electroshock therapy because of adverse electrocardiographic reports. It is well to remember that T wave aberrations may occur on the basis of electrolyte disturbances, drug therapy, infections, endocrine disorders, and many other.

Autonomic imbalance and the psychoses also can influence the electrocardiogram. Vagotonia produces tall T waves; sympathicotonia produces low, flattened, or diphasic T waves. Electrocardiograms of patients are shown which reveal that depressed ST sectors and T wave abnormalities in any lead may revert to normal after electroshock therapy and improvement in the mental status.

A case is reported of a patient with deeply inverted T waves in the standard leads and coronary-type inverted T waves in the precordial leads V 5,6, who had been denied electroshock therapy at another institution on the basis of these changes. After due study she was given electroshock therapy, and on discharge, the electrocardiogram was normal.

These electrocardiographic changes must be due to the disturbed mental state or autonomic nervous system imbalance because they are otherwise unexplainable.

Electrocardiograms were made on over 1,000 patients prior to electroconvulsive therapy. A great number were abnormal and suggested "myocardial damage," but the changes could have been due to systemic disorders: either metabolic, nutritional, neurogenic, or psychogenic. Fifty cases of this type were studied after successful electroshock, and in many the electrocardiograms had returned to normal.—*Author's abstract.*

Emotional Factors in Cardiovascular Disease. E. WEISS. Philadelphia, Pa. Pennsylvania M.J. *54*:319-323, April 1951.

The term cardiac neurosis usually refers to psychoneurosis with heart symptoms but with a normal heart and a normal life expectancy. Attention is called to the fact that the emotional problems of organic heart disease are even more important because the individual with cardiac neurosis with a normal heart does not have a life-threatening situation, whereas the reverse is often true in the patient with organic heart disease plus neurotic factors. Here, constant emotional tension or acute periods of tension due to emotionally disturbing events may precipitate cardiac breakdown that would otherwise not occur. This is one of the important subjects in cardiology since it bears upon the problem of angina pectoris and coronary artery occlusion, both of which have to do with sudden death and chronic invalidism.

The subject of emotional factors in high blood pressure is included. Here again is an important subject, much neglected in medical literature in spite of the fact that physicians generally appreciate that high blood pressure is much influenced by emotional factors; often unconsciously, they take this fact into consideration in the treatment of patients with hypertension. Emotional factors are important in the precipitation of hypertension and in the aggravation of existing symptoms, and they enter into the problems of treatment in nearly every patient. They are not the whole answer, because constitutional factors are equally important, but they must be included in any consideration of this subject. Two cases are cited to illustrate these subjects. 4 references.—*Author's abstract.*

The Psychosomatic Aspects of Cardiospasm. J. M. McMAHON, F. I. BRACELAND AND H. J. MOERSCH, Rochester, Minn. Ann. Int. Med. *34*:608-31, March 1951.

An inquiry was made into the pathogenesis of cardiospasm by studying from the psychiatric point of view a group of 25 patients suffering from this disorder. The following findings were noted: 24 patients suffered emotional trauma, viewed in the light of the individual's own value system, at the time of onset of symptoms. This was absent in the twenty-fifth patient, who was so withdrawn and hard to approach, however, that a good rapport could never be established. Nevertheless, this individual presented the same personality factors which were noted in the other patients. In general, symptoms tended to be aggravated when the patient was nervous or upset and less severe or absent when things were going smoothly. It was pointed out that such fluctuations in the clinical course, which can occur at times in less than a minute, are strong arguments that cardiospasm is a so-called "functional" disturbance. Recurrences were noted to follow repeated or new psychic trauma. A number of environmental and emotional reactions were noted to be present at the time of onset of symptoms. This included hostility and resentment; economic loss or insecurity; death of a parent on whom the patient was unusually dependent; feelings of rejection; fears of death, insanity, or failure; frustration; the menopause; and surgical procedures. Factors of secondary gain were noted in 3 cases.

As a group, these patients were noted to be passive, dependent individuals with many common personality features. They gave evidence of personality difficulties from childhood, plus other neurotic manifestations in adult life. Many were depressed. These findings were felt to bear out a previous observation that cardiospasm is a disease of the frustrated and is not seen in happy, contented, and well-adjusted individuals.

Some of the gaps in our present knowledge of cardiospasm were indicated, and the therapeutic implications of the above findings were discussed. The pathogenesis of cardiospasm was felt to be still obscure. It was suggested that emotional conflicts in cardiospastic patients are capable of initiating a flow of impulses over sympathetic fibers to the cardia, preventing normal vagal relaxation before a bolus of food. Dilatation of the esophagus is probably due to stretching from efforts to force food into the stomach.

The occurrence of cardiospasm in children requires further study. Likewise the application of psychological insight to treatment.

It was suggested that if purely somatic treatment, such as dilatation or other operative procedure, is used, the patient may have a recurrence of symptoms, or if the symptom was psycologically necessary, reaction to symptom removal may be pathologic. Further study is necessary to determine whether dilatation itself may be of value psychotherapeutically and whether an additional psychiatric approach should be used as treatment.

Two of the case reports are presented in toto. The balance are to be found in Dr. McMahon's thesis, which was submitted to the faculty of the graduate school of the University of Minnesota in partial fulfillment of the requirements for a degree of Master of Science in Medicine, of which this article is an abridgement. 49 references.—*Author's abstract.*

Psychogenic Deafness (*Emotional Deafness*). N. R. H. BLEGVAD, Copenhagen, Denmark. J. Laryng. & Otol. 65:166-182, March 1951.

Experiences from World Wars I and II have shown that deafness resulting from the effects of loud sounds upon the ear, sometimes associated with an increase in the air pressure (the explosion of a grenade, bomb, mine, or gunfire), is in some cases entirely psychogenic and can be cured by psychiatric treatment. In other cases the deafness is due to a small organic lesion of the labyrinth, resulting in the impairment of hearing for tones at c^5 and above. However, this lesion is always accompanied by a great "psychic overlay." If this can be abolished, hearing of the normal or whispered voice will again become normal. In some cases a "dip" at c^5, perhaps extending up to c^7, will persist, but this "dip" does not impair the understanding of either whispered or ordinary speech because for these only the frequencies from 500—2000 cycles (c^2—c^4) are significant. 58 references, 10 figures.—*Author's abstract.*

Psychiatry in Prenatal Care and the Problem of Abortion. WLADIMIR G. ELIASBERG, New York, N. Y. Med. Wom. J. 58:27-30, Jan.-Feb. 1951.

Increasingly one has come to stress the importance of endogenous factors in the psychoses connected with gestation. As Gregory Zilboorg pointed out in 1928: "In women who are [so] disposed, childbirth is a nodal point and the causative agent of the psychoses." Clinical forms and the question of whether multiparae or primiparae are more endangered are less important; nor is the psychoanalytic viewpoint of particular interest to the physician in charge of prenatal care. The main task of this physician is to search out cases that are endangered. In 5 cases that are described in detail, the following factors were analyzed: cultural conditions, interpersonal relations, (husband, mother of the wife, other children), socio-economic conditions, and psychiatric diagnosis. While the psychiatric diagnosis, according to the law, is a decisive factor, the other factors should not be overlooked. In a number of cases, psychiatry may be called upon to help the mother to solve her many problems of mental order during gestation. A case which yielded surprisingly well to psychotherapy is described.

At any rate, calling in a psychiatrist does not mean the death knell for the child. Both by relieving the conflicts of the pregnant woman who should continue and by stating psychiatric indications for interruption, within the pale of the law, psychiatry can channel away from the abortion mills a considerable number of unfortunate prospects. —*Author's abstract.*

The Psychological Approach in Anaesthesia. MARK SWERDLOW, London, England. Anaesthesia *6*:96-99, April 1951.

Despite the recent technical advances in the field of anesthesia, the anesthetic remains an ordeal for the average patient. The anesthetist can do much to quiet the patient's fears and should establish rapport with him as soon as possible after surgery is decided upon. After a thorough physical examination, the patient should be reassured as to his fitness for the operation and his fears dispelled by frank discussion.

The acquaintance should be renewed shortly after the patient's admission to hospital and his preference of anesthetic discussed. Idle "operation talk" with convalescing surgical patients and seeing returning postoperative cases should be discouraged. Reassurance and suggestion can do much to reduce the incidence of postoperative vomiting, headache, etc.

In the anesthetic room the patient frequently exhibits his typical fear reaction — either depression (overquietness, or overt manifestations of fear), or elation (talkativeness, making too light of matters, etc.).

During induction, a cheerful flow of conversation and a final word of reassurance will do much to calm a nervous patient, particularly with children with whom a little friendly chat often ensures a cooperative "playmate."

Postoperatively the anesthetist can, by assurance and suggestion, convince the patient that the anesthetic was not such a bad experience (to the benefit of any future anesthetist), and that any minor sequelae will soon disappear. 2 references.—*Author's abstract.*

PSYCHIATRIC NURSING, SOCIAL WORK AND MENTAL HYGIENE

See Contents for Related Articles

PSYCHOANALYSIS

Supervision of the Psychotherapeutic Process. LEWIS R. WOLBERG, New York, N. Y. Am. J. Psychotherapy. *5*:147-71, April 1951.

Supervision of the work of the young therapist is an essential requirement in his learning. Without supervision it will be difficult or impossible for the therapist to integrate his theoretical knowledge into effective practice, to work through blocks in understanding, and to develop his skills to a point where he can help his patients achieve the most extensive goals. Supervision, then, is essentially a teaching procedure, in which an experienced psychotherapist helps a less experienced individual acquire

a body of knowledge aimed at more dexterous handling of the therapeutic situation.

Supervisory problems may roughly be divided into five categories: (1) problems in orientation, (2) problems in recording, (3) problems in technical performance, (4) problems in learning, and (5) problems in termination of supervision.

PROBLEMS IN ORIENTATION

Differences in Theoretical Orientation. Important and often irreconcilable differences occur in the theoretical background and orientation of the supervisor and the therapist whom he is supervising, a product usually of various kinds of preclinical training.

The most effective supervisor is one who respects the right of the therapist to his own ideas and opinions, yet who insists on the acceptance of a broadly conceived dynamic orientation.

Differences in Communication. Both supervisor and therapist may be victimized by an esoteric terminology. Translation of complex language forms into concepts with which both participants are conversant is vital to a mutual understanding and to the establishment of a common frame of reference.

Differences in Method. Resolution of serious differences in method is to be expected in the course of good supervision. Considerable flexibility will be required in methodological approaches, particularly where the therapist is expected to handle in the practice for which he is being trained a wide assortment of clinical problems.

Differences in Goals. Problems may arise between therapist and supervisor on the basis of varying concepts of what makes for success in psychotherapy. The therapist, having been trained in the tradition that any therapeutic change falling short of complete reconstruction is spurious, may look askance at the supervisor who considers goals in terms of optimal functioning within the limitations of the reality situation. Or the supervisor may be unwilling to accept goal modification and may regard with contempt changes that fall short of absolute phychosocial maturity with complete performance in all areas of living.

PROBLEMS IN RECORDING AND REPORTING

Data on functioning are supplied by the therapist's reporting of his activities with patients. Neurotic feelings toward the supervisor may distort the therapist's presentation of material. Pertinent data may be deleted, irrelevant items may be introduced, and secondary elaboration may destroy, totally or in part, the value of the presentation. Fear of exposing deficiencies, of appearing ridiculous, of incurring the displeasure and contempt of the supervisor are among the more common causes of poor reporting.

PROBLEMS IN TECHNICAL PERFORMANCE

The therapist will experience difficulty in various areas in the process of doing psychotherapy. These difficulties are the consequence either of lack of understanding, experience, and skill, or of countertransference. They will have to be handled by the supervisor in relation to their origin and function.

PROBLEMS IN LEARNING

All learning necessitates a substitution of new patterns for old. The manner in which learning proceeds is unique for the individual both in relationship to the rate of learning, as well as the methods by which material is absorbed and integrated. Learning involves both an understanding of theory as well as its integration and translation into effective action. No learning is possible without a motivation to learn. Anxiety is present in all learning. Its sources are related to fear of change and the desire to cling to familiar patterns, as well as to resistance to altering basic accepted attitudes and behavior tendencies. Resistances to learning must be overcome before learning can proceed. Learning is facilitated by a warm working relationship between supervisor and therapist. It is impeded by hostility that develops in this relationship. A primary focus, then, in the supervisory process, is the existing relationship between student and teacher, with thorough ventilation of negative feelings before these exert a corrosive influence on the learning process.

PROBLEMS IN TERMINATION OF SUPERVISION

The relationship the therapist establishes with the supervisor will, in general, proceed through various phases, including the establishing of rapport with the supervisor, the understanding of his problems in relation to the supervisor, the translation of this understanding into corrective action, and finally, the ending phase in which the therapist develops the capacity to carry on on his own, working through his dependence on the supervisor.

SUPERVISION AS AN INTERPERSONAL RELATIONSHIP

Supervision will produce feelings in the therapist that are related to neurotic attitudes toward authority. Difficulties in relationships to authority may come out toward the supervisor in the nascent state, in the form of verbalizations or behavioral acting-out. They may also be concealed behind a barrage of defenses which reflect the therapist's habitual patterns in his dealing with authority. The supervisor will, in his turn, respond in supervision with feelings toward the therapist, many of which are the product of neurotic attitudes toward subordinates. The supervisory process will thus arouse feelings and attitudes in both supervisor and therapist. The readiness of dissolution of these attitudes will depend upon their severity, the level of insight possessed, the strength of existing provocative factors, and their functional utility or destructiveness.—*Author's abstract.*

A Method for Objective Quantification of Certain Countertransference Attitudes. FRED E. FIEDLER, Chicago, Ill. J. Clin. Psychopath. 7:101-7, April 1951.

A method for quantification of certain countertransference attitudes is presented. The method involves self-description by the patient by means of an array of statements which he is asked to sort in line with the Q technic methodology. The therapist is asked to predict the patient's self-description, to describe himself, and to describe

how he would, ideally, like to be. By appropriate statistical handling, the therapist's over- or under-estimation of the similarity between his own and the patient's self-description, and the estimated similarity between the patient's self-description and the therapist's ideal is used to measure the nature and intensity of certain countertransference feelings which have here been tentatively interpreted as falling on the dimension of empathy, psychological distance, and demandingness-supportiveness. An exploratory study is presented as an example of the method. Twenty-two psychotherapists were rated by their immediate supervisor in terms of therapeutic competence. Correlations between psychological distance, as measured by this method, and supervisory rating was .59 (1 per cent level of significance). Subsequent studies confirmed the interpretations of these unconscious attitudes and indicated that good therapists hold different attitudes toward their patients than poor therapists. 6 references. 2 tables.—*Author's abstract.*

Origin and Significance of the Jewish Rite of Circumcision. FRANK ZIMMERMANN, Flushing, N. Y. Psychoanalyt. Rev. *38*:103-12, April 1951.

The Jewish rite of circumcision is called "berit milah," — "the covenant of the circumcision." Whenever possible, it is obligatory of the father to perform the circumcision himself. The *berit* represents a condensation of two distinct acts: a blood-letting whereby, in ancient times, a child was admitted into the kinmanship of the tribe; blood was exchanged by father and son. The ritual parallels precisely that of a "stranger" or convert coming into the tribe. (Elijah is present to save the child, I Kings 17:17 f.) Second, the cutting of the foreskin, which is an attempt to insure fertility and the continuity of the self. When an uncircumcised male has a penis erection, the glans penis is disclosed. Jewish circumcision is a copy of a penis in erection, done with the unconscious thought, that the penis now circumcised should be ready to fertilize always as if in perpetual erection. The act was retrojected from puberty to the eighth day because of an unconscious fear of retaliation, and because moreover the *tabu* of the mother (and child) was removed after the seventh day (Leviticus 12.3). 8 references.—*Author's abstract.*

The Concept of Adult Libido and the Lear Complex. ARPAD PAUNCZ, Lyons, N. J. Am. J. Psychotherapy 5:187-95, April 1951.

Freud and his followers considered infantile sexuality and the Oedipus complex with its complications and elaborations the most important aspect of the human personality. Theirs is a genetic-dynamic approach resulting in a much deeper and more penetrating understanding of psychopathologic and even of normal manifestations than was ever before possible. Certain features of this approach, however, need further deliberation and critical evaluation.

1. Of the many possible incest relationships, Freud emphasizes only the incestuous attachment of the child toward the parent of the opposite sex, actually making it the core of his theory and the basis of all his conclusions; he disregards almost

entirely other possible manifestations of incest, for instance, parents' incestuous attachment to their children of the opposite sex.

2. The concept of adult libido deals generally with instincts originating in adults (as opposed to the infantile instincts) and directed towards children; the Lear complex, specfiically, deals with the father's libidinous fixation toward his own daughter (as a counterpart to the daughter's libidinous fixation towards her father in the Oedipus complex).

3. It almost automatically follows that the insight gained by Freud primarily concerns the infant or the infantile aspect of the grown-up, and that the specific and unique quality of the adulthood of the grown-up is not taken into consideration.

4. Adult experiences are essentially different from experiences of childhood and incestuous conflicts are solved in a different manner and on a different level.

5. While the childhood conflict is principally unconscious and the child only belatedly realizes that he "committed a crime," the adult conflict begins with the full and conscious realization that "a crime is going to be committed."

6. The child's experiences are primitive and undifferentiated; the child is confronted with a blind and elementary force with which it only gradually learns to cope. The grown-up, with a great amount of experience behind him, is highly integrated and when faced with his adult incestuous problems is much better equipped to tame the forces which threaten to overwhelm him.

7. The presence of the Lear complex may not lead to the development of a psychosis, but it may easily be responsible for many psychoneurotic-like symptom manifestations or for many peculiarities of advanced age.

8. Understanding and interpreting the life manifestations of adults as the appendix of their own childhood without giving due credit to their unique autonomy and integration as grown-ups is not considered scientifically valid.

9. The concepts of adult libido and Lear complex try to do justice to such considerations and observations and are presumed to be a supplement to the one-sided approach of psychoanalysis.

10. In subsequent papers, the heuristic value of htese concepts is being tested for the understanding of "adult perversions," "old age," "creativity," and "death-instinct."

Objective Evaluation of Personality Tests. JOSEPH ZUBIN, New York, N. Y. Am. J. Psychiat. *107*:569-576, Feb. 1951.

The final judgment that the scientist must perforce arrive at is that no objective evaluation can now be made of personality tests because they have not yet attained the status of tests yielding specifically defined scores. As technics for aiding in clinical judgment, they have proved their worth. As independent tests, they are found wanting.

The reason for their failing is that no two responses are ever sufficiently alike that they may be classified as equivalent. In order to evaluate responses, some abstract dimensions must be provided. But insufficient theoretical frameworks have thus far been provided for abstracting the concrete response. The present scoring systems are too concrete, too close to the original response, and not sufficiently abstract to yield a measurable dimension of behavior. When personality tests yield abstract

scorable dimensions of the type that the physicist finds when he abstracts from a given concrete object its weight, temperature, volume, etc., we shall be able to make more headway. To those who say that no such measures will ever be possible, let me point out that the ancient Babylonians and Egyptians in the dawn of history had no thermometers, but they did evaluate temperature concretely in terms of the heat of fire and the heat of summer and cold of winter. They had a scale ranging from the heat of fire through the hottest day of summer to the coldest day of winter. This scale was used until the thermometer was born. History does not record the reaction of the populace to the first thermometer, but I can imagine the following complaints about it: "You can't measure such an imponderable characteristic as temperature — it is too global, too diffuse, too all-encompassing to yield its secret to that mercury stick. Besides, yesterday I perspired freely, today is relatively cool, but that thermometer registers the same reading." Had the thermometer makers discarded their instrument at that point, science would have suffered a severe loss. Only by persevering with the thermometer did we discover the other factors that go into the global concept of subjective warmth.

For this reason, scientists are providing rating scales for catching the essence of the concrete responses and for classifying these essences along proper dimensions. The virtue of these scales is that they reveal not only what types of responsiveness the patient exhibited, but also which type he failed to exhibit. Another solution that scientists are seeking is to reduce the personality technics to simpler structure, and to utilize more specific direction for obtaining measurable performance.

Whether such approaches will eventually elevate projective technics to the status of personality tests is still debatable. Some evidence, however, has been provided to show that scaling of variables and simplifications of test material lead to more precisely definable relationships with clinically observable variables. Whether these tests, even in their higher level of development, can replace clinical judgment, interviews, or examination is highly doubtful. But that they can be of greater helpfulness and of greater dependability is much to be hoped. 18 references.—*Author's abstract.*

Treatment of Schizophrenia. A Comparison of Three Methods: Brief Psychotherapy, Insulin Coma and Electric Shock. J. S. GOTTLIEB AND P. E. HUSTON, Iowa City, Iowa. J. Nerv. & Ment. Dis. *113*:237-46, March 1951.

Three methods of treating schizophrenia are compared: brief psychotherapy, insulin coma, and electric shock. The results did not show superiority for any one of the three methods. This statement applies to the final clinical status over a one to four year follow-up period, to the clinical status at successive follow-up periods after discharge, to the constancy of the course after discharge, to the final clinical status by type of onset, to the final clinical status by duration of illness before treatment and to the final clinical status by schizophrenic subtype. In none of these comparisons was a statistically significant relation found.

It was also shown that patients who had an acute onset had a significantly better recovery rate than those with a gradual onset. Patients who had been sick six months or less had a significantly better recovery rate than those who had been

ill seven months or more before treatment. The recovery rate by subtypes for all three groups, when combined, was significant. The catatonic, paranoid, and unclassified groups had a high recovery rate compared to the simple and hebephrenic groups. It would seem that more important for recovery than the methods of treatment employed were these variables of type of onset, duration of illness before treatment, and schizophrenic subtype. 5 references. 7 tables.—*Author's abstract.*

PSYCHOPATHOLOGY

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Evaluation of Psychotherapy with a Follow-Up Study of 62 Cases of Anxiety Neurosis. H. H. W. MILES, E. L. BARRABEE AND J. E. FINESINGER, Boston, Mass. Psychosom. Med. *13*:83-105, March-April 1951.

The problem of evaluation of psychotherapy is discussed, with a review and criticism of previous reports in the literature. Lack of knowledge regarding etiology, natural history, and "spontaneous" recovery rates in the psychoneuroses makes evaluation of treatment especially difficult. Studies which report simply the percentage of patients showing improvement after treatment are not comparable to one another, and no general standard such as the so-called basic amelioration rate can be used to measure the effectiveness of psychotherapy in a specific group of patients. It is suggested that an adequate follow-up study should include a socio-cultural description of the patients and a statement as to the selection of cases. Significant factors in the patient's personality development should be studied, as well as a comprehensive dynamic formulation of the neurosis. The prognostic assets and liabilities should be considered and the therapeutic process should be described and studied in detail.

The authors made a follow-up study of 62 patients who had been diagnosed "anxiety neurosis." Appraisal was done by considering the patient's symptoms, social adjustment (which included occupation, interpersonal relationships, marriage and sex), degree of insight, and life situations subsequent to hospitalization. Rating scales were constructed empirically to determine for each patient his "pre-treatment" adjust-

ment and "follow-up" adjustment. The scales were based upon the expectations demanded of an individual in our particular culture.

The follow-up period was from 2 to 12 years (with a mean of 6.6 years); 23 per cent of the group were found to be markedly improved, 35 per cent were definitely better, while 42 per cent were considered essentially unchanged. There was a very close correlation between the authors' evaluations and the patients' own self-evaluations. In no case was previously unrecognized medical or surgical disease later found to be associated with the symptoms, and no case had later become psychotic.

Factors which might be related to prognosis were then studied by comparisons of the three groups: Group A consisted of those cases which were *markedly improved;* Group B, those considered *definitely better;* and Group C, those *essentially unchanged.* Elements which seemed to favor improvement included good intelligence, good childhood home environment, adequate life adjustment in childhood with anxiety neurosis precipitated rather acutely as a result of a situation which overwhelmed the ego defenses. Elements associated with failure to improve were borderline intelligence, poor childhood home environment, overt neurotic difficulties in childhood and insoluble reality problems in the current life situation. None of the patients showed much insight, but the group which improved the most also appeared to have the most capacity for insight.

It was not possible to judge accurately the importance of treatment as one of the factors associated with improvement or lack of improvement. Almost the whole group had been treated by inexperienced therapists, but a slightly higher percentage of patients in the improved categories had been treated by the more experienced psychiatrists.

In their discussion the authors considered the need for objective and explicit means of clinical appraisal and pointed out the complexity of the task. The reproducibility of their methods was tested, and it was found that finely graded degrees of improvement could not be distinguished consistently when the rating scales were applied by independent observers to case material such as was included in the study. It was believed that further progress in the problem of evaluating therapy (and clarifying the prognostic factors) awaits more detailed investigations and methodologic advances in the analysis of data. 76 references. 2 figures. 6 tables.—*Author's abstract.*

the "shock" therapies

Comparison of Decamethonium Bromide (C 10) and D-Tubocurarine as Preventives of Traumatic Complications in Electroshock Therapy. A. E. BENNETT, L. G. McKEEVER, AND RICHARD E. TURK. A. E. Bennett Neuropsychiatric Research Foundation, Berkeley, Calif.

Because of controversial opinions on the use of the two relaxants, the authors have carefully compared C10 with d-tubocurarine in 680 electroshock treatments of 95 patients during a five month period. The methodology took into account the differences in pharmacologic action of the two drugs. Comparisons were made in control

groups by quantitative methods of sphygomomanometer and dynamometer readings to measure degree of relaxation and exact measurement of time intervals. Subjective estimations of pretreatment distress, amounts of salivation, and strength of clonic contractions were noted separately by two observers, to one of whom the particular drug used was not known. Results of the comparisons showed that both drugs gave adequate paresis; neither drug increased the convulsive threshold; at optimum dosage both had similar effects on circulation and respiration; the differences in the side effects of pretreatment anxiety and excessive salivation were so slight as to be unimportant; and both were safe in competent hands. Disadvantages of C10 included the lack of a simple method whereby to determine optimum dosage, as compared with the established method in the use of d-tubocurarine. Unpredictably variable effects were seen from patient to patient, and, with repeated dosages, in some cases in the same patient. The shorter time of action of C10 was disadvantageous in that the patient under conventional electroshock treatment may regain normal strength while still in a state of postshock confusion, thus requiring the use of extra restraints. Fatigue does not change the action of C10, although it increases the effect of d-tubocurarine. Also detrimental is the fact that C10 has, at present, no adequate pharmacologic antagonist, whereas d-tubocurarine has well established safeguards. D-tubocurarine therefore remains the drug of choice, as compared with C10, for prevention of traumatic complications in electroshock therapy.—*Author's abstract.*

Electronarcosis in a General Hospital. M. M. ESTES AND H. M. CLECKLEY, Augusta, Ga. Am. J. Psychiat. *107*:814-20, May 1951.

Between January, 1948 and July, 1949 electronarcosis was given to 110 patients at the University Hospital, Augusta, Georgia. Eighty-four of these patients were studied from considerations of complications and results obtained.

Indications for treatment were: (1) previous treatment failure by other recognized technics, (2) disorders, neurotic and psychotic, with inherently poor prognosis irrespective of treatment methods, and (3) patients with certain orthopedic and cardiac complications who represented poor physical risks for other mechanical treatments.

Technic is discussed briefly, and minor deviations from the usual electronarcosis methods are pointed out. The complications of laryngospasm, cyanosis, cardiac involvement, pharyngeal irritation, dental loosening, electrode burns, and orthopedic injuries are also discussed.

Methods of prevention and/or remedy of these complications are offered. Cyanosis, the most ominous symptom of serious disorder, demands immediate alleviation. In the series under study there were no deaths directly attributable to electronarcosis. One death occurred incident to treatment, and two serious cardiac complications developed. There were no orthopedic complications in this series of 110 patients treated by electronarcosis.

Results of treatment are tabulated according to improvement, correlated with type of disorder, age, duration of disorder, and previous treatment. Of the 84 cases studied, 58 showed marked improvement immediately following treatment. Forty-four of these patients remained improved over the 18 month follow-up period.

Electronarcosis produced significant improvement in the following disorders: (1) chronic anxiety in patients under 30 years of age who have not responded to other treatment methods, (2) neurotic depressions, (3) mixed psychoneuroses, (4) schizophrenia of less than two years duration with affective liability, and (5) the involutional psychoses which have not responded to electroshock, particularly when agitation and/or melancholia is present.

No particular advantage from electronarcosis was found in manic-depressive psychoses, neurasthenia, or obsessive-compulsive ruminative tension states.

The advantages of electronarcosis are many. It is a comparatively safe treatment. Post-shock confusion is minimal. This advantage affords more freedom to the ambulatory patient, accessibility for concomitant psychotherapy, as well as more accurate evaluation of the status of the disorder during treatment. From the patient's standpoint, electronarcosis is obviously less objectionable than electroshock.

The disadvantages of electronarcosis compared to electroshock are apparent. Electronarcosis is time-consuming, exacting, and demands more highly-trained personnel. It does not seem likely, or even desirable, that electronarcosis should replace the tried and proved mechanical treatment methods. It is, however, a valuable adjunct to the established therapies in our efforts to provide total treatment for our patients. 6 references. 4 tables.—*Author's abstract.*

Shock Treatments in Psychiatry. WILLIAM KARLINER, New York, N. Y. Am. Pract. 2:511-516, June 1951.

The most important forms of shock therapy are insulin coma, metrazol, and electroshock. They are used widely in the treatment of schizophrenics, affective disorders including endogenous depressions and manic-depressives, involutional and senile psychoses, paranoid states, and in some depressed psychoneurotics.

Insulin coma therapy is the treatment of choice in most schizophrenics. Many schizophrenics who have failed to respond to electroshock treatments may improve with insulin therapy. On the other hand, some who did not improve satisfactorily with insulin can be helped with electroshock treatments or electronarcosis. Catatonic patients recover more quickly and more dramatically with electroshock treatments, however, they are inclined to relapse. It is therefore safer and better to follow up the improvement that has been achieved by electroshock therapy with insulin coma. Schizophrenic patients who failed to improve after a course of electroshock and a course of insulin comas, may benefit from electronarcosis. Insulin is also used in other conditions, such as manic states, involutional paranoids, drug addiction, acute alcoholism, and alcoholic hallucinosis.

If schizophrenics do not respond to either convulsive or insulin coma therapy, a combination of both should be given. This intensification of treatment increases the recovery rate. Occasionally, better results are achieved with insulin-metrazol combinations than with insulin-electroshock combinations. Ambulatory or subcoma insulin therapy is of value in relieving anxiety and tension states, as seen in various mental disorders such as psychoneurosis and schizophrenia. It is not a substitute for insulin

coma therapy. Complications of insulin coma therapy and some preventative measures are described. The presence of tuberculosis and diabetes are considered definite contraindications to insulin coma therapy.

The use of metrazol for the induction of a convulsion has been almost discarded since the introduction of electroshock therapy. However, it would be erroneous to eliminate its use in certain instances. Metrazol, in doses of 1-2 cc., given intravenously prior to electroshock treatments lowers the electric threshold and also decreases or eliminates prolonged apnea following the treatment.

The indications and contraindications of ambulatory electroshock are discussed. The advantage of using premedications such as atropine, quinidine, amphetamine, sodium amytal, coramine, and curare are mentioned. To decrease skeletomuscular complications, the use of the glissando technic, two or more electric stimulations, and the use of a bed sheet tied around the chest and arms of the patient are recommended. Manual restraint of the patient during electroshock is not advisable.

Neurotics were found to be more amenable to psychotherapy after the alleviation of their depressions with electroshocks. Neurotics who are not depressed show aggravation of their anxiety and react intensely to the ensuing memory defect; they should not receive electroshock therapy.

Electroshock has a beneficial effect on all depressions even in the presence of organic brain diseases such as general paresis, Parkinson's disease, or multiple sclerosis. Complications of electroshock are described. The author mentions the occurrence of herniated cervical and lumbar intervertebral discs following electroshock. Depressed patients should receive the minimum number of treatments necessary for improvement. Close observation for at least one year is advised to avoid premature termination of the treatments and recognition of a relapse. In schizophrenics, at least 30 treatments should be given. Maintenance as well as periodic electroshock was found to be very useful.

Shock treatments are a symptomatic form of therapy and are of unquestionable benefit in certain psychiatric conditions. They should be administered only as part of an over-all psychiatric treatment program. 9 references.—*Author's abstract.*

Further Observations on 62 Lobotomized Psychotic Male Veterans at the Veterans Hospital, Northport, N. Y. L. DRUBIN, New York, N. Y. J. Nerv. and Ment. Dis. *113*:247-56, March 1951.

A follow-up study of 62 prefrontal lobotomy patients, all but two of whom were observed postoperatively from 11 months to 4 years, has revealed that 17 (27 per cent) were markedly improved, 19 (31 per cent) were moderately improved, 17 (27 per cent) were slightly improved and 9 (15 per cent) were not improved. Following operation, all patients were given intensive rehabilitation and reeducation and were sent home as soon as possible, if the patients' improvement and home environment warranted trial visit or discharge.

As the time interval between the date of operation and the date of evaluation increased the total number of appreciably improved patients tended to decrease, and

the number classified as slightly improved or not improved tended to increase. Only two of the patients who left the hospital made a satisfactory occupational adjustment and only five have made a good social adjustment.

None of the 12 patients with preoperative self-destructive tendencies presented such ideas following lobotomy. Catatonic and hebephrenic types of schizophrenia showed better improvement than the other types and the greatest number of relapses occurred among the catatonic. No feeding or elopement problems were encountered in this series of patients following lobotomy.

Twenty (32 per cent) of the patients have developed convulsive seizures following operation. The longest time interval between the date of operation and the first convulsion was 15 months, the average was 8.5 months. Electroencephalography was found to be of only limited value in designating which patients will or will not have seizures postoperatively. No correlation was evident in this series of cases between improvement of the postoperative abnormal electroencephalography and clinical improvement in the patient's mental condition.

The loss of some of the more desirable qualities often accompanied the improvement in the far less desirable symptoms as a result of lobotomy. However, lobotomy is the treatment of choice at the present time for chronic, agitated, hyperactive or self-destructive patients who have failed to improve with all other types of therapy. 11 references. 4 tables.—*Author's abstract.*

In the Margin of Psycho-Surgery. "A Non-Mutilating Intracerebral Therapy." PAUL ABELY AND PAUL GUYOT, Paris, France. Presse med. 59:1010, July 14, 1951.

Considering, on the one hand, the unquestionable success obtained by psychosurgery in such mental conditions as seem irreducible, and, on the other hand, the drawbacks of a method inducing important anatomic damages as well as a lack in explanation of its mode of action (this being only hypothetical so far), the writers have been led to investigate the possibility of acting biologically on the prefrontal lobe by injecting, *in situ*, such substances as are not destructive but do exert a pharmacodynamic and biologic effect. With these intracerebral injections, by a simple and rapid technic, the writers have obtained very marked improvements in various mental depression states (anxiety, obsession, cenesthopathia, recurrent or chronic melancholia) which had not responded to any therapy, even to shock therapy. The improvement was not preceded by the period called "dead" (temps mort) subsequent to the lobotomy operation and did not seem to impair the "ethical" function. In schizophrenics either significant "de-blockage" or elective modifications in the field of negativism, apathy and/or impulsion were observed, but no response has been recorded, of course, in certain cases.

Within a few months of treatment no conclusive appraisal is possible, but it is of interest to show, from the results obtained in 50 cases, that psychopathic conditions may be modified by a direct, simple, and non-mutilating intervention on the prefrontal lobe, such successful modifications being comparable to those produced by the usual psychosurgery.—*Author's abstract.*

Amygdaloidectomy for the Suppression of Auditory Hallucinations. A Preliminary Report of a Theory and its Application in One Case. JONATHAN M. WILLIAMS AND WALTER FREEMAN, Washington, D. C. M. Ann. District of Columbia *20*:192-96, April 1951.

Since the introduction of prefrontal lobotomy by Moniz in 1935, it is estimated that 20,000 patients have now undergone some form of psychosurgery for the treatment of mental illness. In this large group there is a very definite percentage of social failures. In reviewing a number of the cases which we considered social failures we found, among other things, that the persistence of hallucinations, usually of an auditory character, was a frequent finding. Therefore, it seemed to us that a specific mechanism must exist which could be activated by the psychosis and produce auditory hallucinations and which might not have been touched by prefrontal lobotomy.

In recent years the focus of attention in psychosurgery has shown signs of shifting from the frontal lobes to the temporal lobes. Just anterior to the hippocampus and lying in the medial wall of the temporal horn at its anterior limit is the amygdaloid nucleus to which no particular function has been ascribed. This group of nuclei is generally divided into three main branches: the anterior group, the cortico-medial group, and the basolateral group. Of these three, the basolateral group contains no fibers traceable to it from the rhinencephalon. Furthermore, connections from this nuclear group can be traced upward and outward to the overlying temporal cortex.

Neuronographic studies lately reported by Pribram emphasize the importance and close relationship of orbital portions of the frontal lobes with the medial and polar temporal regions, presumably through the uncinate fasciculus. It is our theory that the uncinate fasciculus has responsible connections in the basolateral nucleus. This nucleus, as we know, projects to other areas of the temporal lobe which could embrace the primary and secondary cortical area of hearing. In cases of prefrontal lobotomy in which the fronto-basolateral pathways escape the leucotome, there would still then exist a route whereby the psychotic productions may continue in the presence of apathy. This could explain hallucinations after lobotomy.

We surmise that if the fronto-basolateral system only is eliminated, the somatic and sensory elements of the psychosis might be controlled without the inertia common to lobotomy. The known effects of amygdaloidectomy in animals, as reported by Bard, has been somewhat confusing insofar as behavior is concerned. Wild rats and monkeys have been tamed by amygdaloidectomy, whereas cats are made vicious by its extirpation.

Case Report

C. S., a 20 year old white man had been suffering from auditory hallucinations for a number of years. In addition to this he exhibited a mild bilateral spasticity, a severe refractive error with an alternating strabismus, and bilateral deafness of the mixed type, more marked on the right. Pneumoencephalography revealed generalized ventricular dilatation. The patient was greatly distressed by his auditory hallucinations which were never derogatory but which were of such an insistent quality as

to interfere to a large extent with any productive activity on his part.

In the latter part of December 1950 the patient was admitted to the hospital and a left subtemporal craniectomy was carried out under local anesthesia. Through a transcortical incision the tip of the horn was encountered, and the amygdaloid nucleus was identified as a bulging on its medial wall. This tissue was completely removed up to the pia, on the medial surface. One week later the same procedure was undertaken on the opposite side. Microscopic examination revealed the specimens to be amygdaloid nucleus. There was no elation or disorientation, apathy, or impairment of judgment. The patient denied hallucinations. Three weeks later he was substantially brighter and he was wearing his hearing aid which he had previously avoided because of the "voices." There had been some mild return of hallucinations, but their insistent quality and general interference were greatly diminished. The patient was seen five and one-half months after operation, during which time he had been employed. He denied hallucinations. He was making a better social adjustment and exhibited no apathy or indolence.

We find our results in this one patient distinctly encouraging, and we believe that they lend validity to our concept of an accessory auditory organization system. Time and further study, however, will both be needed to test the probity of our concept. 6 references. 1 figure.—*Author's abstract.*

Prognoses and Psychological Scores in Electroconvulsive Therapy, Psychosurgery, and Spontaneous Remission. ISIDOR W. SCHERER, Northampton, Mass. Am. J. Psychiat. *107*:926-31, June 1951.

Examination of pretreatment psychologic test scores of patients undergoing electroconvulsive shock treatment and lobotomy, and their controls, indicates that there are significant relationships between these scores and improvement. Improvement determinations were formulated from the group judgment of psychiatrists, nurses, aides, and lay therapists. The subjects of the experiment were 111 psychotic patients, divided as follows: 41 patients who underwent shock treatment, of whom 20 improved; 26 shock control patients, 9 improved; 22 patients who underwent lobotomy, 12 improved; and 22 lobotomy control patients, 7 slightly improved.

Improvement following electroconvulsive therapy is significantly related to high pretest levels of categorization, motor speed, and digit span reverse. A positive difference between delay and immediate memory plays a role, as do low pretest frequencies of color-form (CF) responses and rejections on the Rorschach. Improvement of electroconvulsive therapy control patients is related to few rejections on the Rorschach, and high pretreatment levels of visual memory, motor functioning, recall on word association, object sorting, and positive difference between delay and immediate memory. Analysis of the pretreatment means of the experimental and control groups indicates that, with the exception of visual memory, word association recall, and categorization, the improved control patients have initially higher scores than either the unimproved shock patients or the unimproved control patients. This suggests that some patients will improve without shock treatment, while others will not improve, even with treatment.

Improvements following lobotomy is related to high pretreatment levels of memory and abstraction and a low level of rejections on the Rorschach. Those patients who selected M or human responses on the Rorschach seem also to profit from lobotomy. For the lobotomy control group, only digit span backward and auditory memory (hard word pairs) seem to have any relationship to improvement.

The composite picture of the improved patient indicates that the following psychological functions play an important part: memory, intact categorical attitude, motor facility, and willingness to make contact with the environment. These functions seem to have some common elements which should be further explored. Existence of significant prognostic signs suggests that the psychologic test structure of patients be carefully scrutinized before they are made to undergo treatment or before they are considered poor candidates for treatment procedures.

neurology

CLINICAL NEUROLOGY

Report on Character Changes of Organic Origin. (Bericht uber organischer Wesenanderungen). W. DE BOOR, Cologne, Germany. Fortsch. d. Neurol., Psychiat. *19*:147-78, April 1951.

A critical survey of the results of psychopathologic investigations made on patients with character changes of organic origin has shown the results discussed below. The cases used for this purpose comprise the following illnesses: infectious illnesses, cerebral tumors, heredo-degenerative diseases, senile processes, early infantile brain lesions, disturbances of cerebral blood circulation, processes of brain atrophy, traumatic cerebral damages, intoxications of the central nervous system, epilepsy, progressive paralysis, endocrinopathies, including nutritive disturbances caused by famine in years of starvation, and blood diseases:

The basic phenomena of character changes of organic origin comprise, independently of their special etiology, perseveration, loss of psychic plurality of dimensions, formation of a psychic "one-sidedness" ("one-track psyche"), and possibly, disturbances of the "Gestalt-function."

Very rarely have syndromes been observed only with "organic types," such as are to be found in the so-called endogenous psychoses (schizophrenia, manic-depressive psychosis).

Specifically, nosogenous types of dementia seem to be nonexistent. Descriptive, not genetic, points-of-view allow a grouping of the types of dementia according to the respective, characteristic failures of performance, experimental statistics of which can, however, never be completely binding.

The following types of dementia can be isolated: (1) noetic dementia (chiefly disturbances of the thinking and judging faculties); (2) amnestic dementia (chiefly disturbances of memory and recollection); (3) apperceptive dementia (chiefly disturbances of the perceptive and apprehensive faculties); (4) affective dementia (chiefly disturbances in the drive-volition-emotion sphere); (5) chrestic dementia

(chiefly "instrumental" disturbances, "werkzeugstöungen," with relatively intact personality).

The vulnerability of the human character, which shows in an illness, is an important proof of the hypothesis that all psychic phenomena have their somatic correlatives.—*Author's abstract.*

Reversible Cerebral Atrophy. W. P. WILLIAMSON AND C. J. WINTER, Kansas City, Kansas. J. Kansas M. Soc. *52*:107-109, March 1951.

Gross atrophy of the brain, as revealed by the pneumoencephalographic finding of increased surface markings and dilatation of the ventricles, is usually considered to be a permanent condition, regardless of cause. We present one case of a four year old child with an unknown intracranial disease, probably encephalitis, who deteriorated clinically to the vegetative stage, a pneumoencephalogram revealing gross atrophy of the brain. The child, over a period of months, made a surprising clinical recovery, and a repeat pneumoencephalogram six months later revealed a striking improvement in the evidence of gross atrophy of the brain. This case is presented merely as evidence that in at least one instance the findings of gross brain atrophy on pneumoencephalogram are not necessarily permanent and that improvement in gross brain structure, as verified by pneumoencephalography, did occur. 7 references. 2 figures.—*Author's abstract.*

Neurologic Aspects of Fatigue. R. S. SCHWAB AND J. S. PRICHARD, Boston, Mass. Neurology. *1*:133-35, March-April 1951.

The difference in the complete fatigue or exhaustion of a muscle-nerve preparation by electrical stimulation and the apparent fatigue curve from voluntary contractions of the muscle in a human is emphasized. A protective feed-back mechanism in the living creature prevents the former state from ever occurring.

There are four sites in the neuromuscular system of man where the symptoms of fatigue are produced: (1) in the muscle itself from atrophy or disuse; (2) in the myoneural junction (myasthenia gravis); (3) in the lower motor neuron (neuritis); (4) in the central nervous system from interference of motivation because of either structural disease in the brain or blocking of volitional effort by emotional causes.

Neostigmine is effective in only the second type. In others, it decreases the performance.—*Author's abstract.*

The Diagnostic Use of Curare in Myasthenia Gravis. R. E. BEAMISH AND JEAN MCFARLANE, Winnipeg, Manitoba. Manitoba M. Rev. *31*:220-22, April 1951.

In an ordinary case of myasthenia gravis, diagnosis can be made readily from characteristic symptoms and signs. However, in atypical cases, or in cases during a remission, recognition may be exceedingly difficult. It is then necessary to use auxiliary methods of diagnosis. In symptomatic patients the response to prostigmine may be diagnostic (the "chemical test" of Viets and Schwab), but in other instances it may be necessary to increase the myasthenic reaction in order to reveal its true nature. This can be effected by the curare test of Bennett and Cash.

Usefulness of the curare test was demonstrated in a male Chinese, age 57, who was admitted to hospital with extensive bronchopneumonia. Dyspnea was severe and persisted after the pulmonary infection was controlled so that the possibility of congestive heart failure was entertained. He was digitalized and simultaneously given prostigmine with striking improvement. To clarify the diagnosis, the curare test was done with a markedly positive result. It was of particular interest to find that he had been given curare preoperatively eight months previously and had exhibited profound respiratory depression. Seven months previously he had also received prostigmine for constipation and had experienced complete and rapid relief. Thus, this patient, unsuspected of myasthenia gravis, had been subjected to the effects of both curare and prostigmine, given for other reasons and at widely separated intervals. The significance of his response in each instance was accordingly unrecognized.

Curare is now widely used by anesthetists to promote muscular relaxation and by psychiatrists to soften the convulsions of shock therapy. This case illustrates the potential danger attending the use of curare in patients with unrecognized myasthenia gravis. It is advisable to query the possibility of myasthenia gravis in every patient before curare is given. Conversely, any patient who exhibits respiratory difficulty after curarization should be subsequently investigated for myasthenia gravis. 9 references. 1 figure.—*Author's abstract.*

A New (Sublingual) Method for Controlling the Pain of Migraine and Other Headaches (Preliminary Report). LEON UNGER AND ALBERT H. UNGER, Chicago, Ill. *99*:210-11, April 1951.

In our opinion, migraine is an allergic entity which can be prevented by finding the causative food and eliminating it from the diet. However, the food cannot always be found and it may be necessary to relieve headaches as they occur.

A new analgesic combination has recently been reported for the control of pain. The combination consists of acetylsalicylic acid and benzosulfimide (saccharin). The trade name is Theryl. The tablet is allowed to dissolve and be absorbed from under the tongue and buccal mucosa or in the mouth. Results have been very good.

For migraine we have tried a new mixture — Theryl plus an ergot derivative. In 15 patients we obtained faster relief than with any other method except a hypodermic administration of an ergot derivative. In our hands no other oral medication has been as effective in dulling and relieving pain.

Absorption from under the tongue is speedy and this fact explains the quick response obtained in many cases. 1 reference.—*Author's abstract.*

ANATOMY AND PHYSIOLOGY OF THE NERVOUS SYSTEM

Influence of Benadryl upon Electromyographic Recordings in Parkinsonism. J. J. GITT, W. H. LANDAU, AND M. H. CLARE, St. Louis, Mo. Dis. Nerv. System. *12*:117-21, April 1951.

To determine the effect of Benadryl upon the status of muscle activity in Parkinsonian conditions, 30 mg. were given intravenously to each of 13 cases considered

representative of postencephalitic, idiopathic, and arteriosclerotic etiologies. Electromyographic records were obtained simultaneously from biceps and triceps brachii and brachioradialis muscles by percutaneous needle and surface recording, both at rest and during the lifting of a weight. To diminish the obscuring effects of muscle tension which accompanies anxiety, a preliminary examination was carried out to familiarize each patient with the test situation. The results were based upon the comparison of electrical activity of the three muscles before and after the administration of Benadryl at a later examination.

Integrating surface leads gave the most significant results. In subjects with outspoken static tremor the amplitude of the tremor bursts in the EMG record was reduced 50 to 90 per cent after the administration of Benadryl; the rate and general character of the bursts remained unchanged. A similar decrease in amplitude of muscle potentials was noted during weight-lifting; this reduction was particularly prominent in the muscle antagonist of the movement (triceps brachii). In subjects exhibiting rigidity without tremor, a less marked depression of the EMG at rest and during movement was observed after Benadryl. Control EMG and electroencephalography studies upon 2 normal subjects given Benadryl intravenously were not remarkable.

Inasmuch as Benadryl does not affect voluntary movement and may cause some drowsiness, it is inferred that it depresses a subcortical supraspinal mechanism released by the pathologic process. There is general inhibition of the excessively active spinal mechanism and restoration toward normal of the usual reciprocal relations between agonist and antagonist. The improved inhibition of the antagonist during voluntary contraction enables external work to be performed with less over-all exertion. 16 references. 2 figures.—*Author's abstract.*

Organization of the Fasciculus Solitarius in Man. HENRY G. SCHWARTZ, GEORGE E. ROULHAC, ROBERT L. LAM, AND JAMES L. O'LEARY, St. Louis, Mo. J. Comp. Neurol. *94*:221-231, April 1951.

In a unique case in which the afferents of V, VII, IX, and X and the first, second, and third cervical dorsal roots had been divided and a Marchi series obtained later, it was possible to study the organization of the human fasciculus solitarius with relation to its afferent sources and to follow the ascending degeneration from the upper cervical nerves. Thus we were able to verify and extend to the human much experimental work previously carried out.

The contributions of VII, IX and X to the fasciculus solitarius were demonstrated and some evidence was obtained supporting the existence of gustatory nuclei related to VII and IX. We could not show any contribution to the fasciculus solitarius from sensory V or from the first, second, and third cervical dorsal roots. The evidence also indicates that VII and IX myelinated afferents terminate before the caudal extremity of the fasciculus solitarius is reached, and that the caudal portion is derived chiefly from afferents of X.

Confirmation was obtained for the course of ascending degeneration from the upper three cervical nerves as previously demonstrated experimentally by Ranson.

Davenport, and Doles ('32) and Escolar ('44). These ascending root fibers could be followed to a level just caudal to the entry of the IX nerve. 20 references. 3 figures.—*Author's abstract.*

Standing Potential Correlates of Hypnosis and Narcosis. L. J. RAVITZ, Arch. Neurol. & Psychiat. 65:413-437, April 1951.

Sixty DC records were taken of 20 subjects before, during, and after hypnosis using the Burr-Lane-Nims DC- and AC-powered millivoltmeters (the latter instrument combined with a General Electric photoelectric recorder). Recording paper was set at 1 inch per minute, with the grid electrode on the forehead and the reference electrode on the palm of either hand. Results were then compared with 17 records of 13 subjects under sodium amytal narcosis. Four of the subjects were hypnotized, given amytal intravenously, and again hypnotized. Despite repeated failure to detect electrometric correlations with EEG alterations from trance states, it was discovered that certain characteristic changes occur in DC trance records without regard to sex: the DC tracing smooths, losing its waking state pattern. This is associated with a gradual increase or decrease of the mean potential difference (measured in millivolts). Induction, when associated with catalepsy, sometimes causes considerable voltage increases. During the trance, intense emotions such as anxiety and grief cause changes in potential differences, although dreams, hallucinations, and regressions do not alter the typical tracing unless accompanied by strong emotions, which also cause similar alterations in the waking state. Speaking and eyes open likewise do not alter the typical hypnosis record except in subjects who are in very light trances, in which case the tracing assumes a waking state configuration. Euphoria, loquaciousness, and general excitability following hypnosis produce a consistently irregular pattern similar to that effected by narcosis when accompanied by similar states. Termination usually results in dramatic positive voltage shifts, after which the record eventually returns to the waking pattern.

Comparison of hypnosis records with records of other states reveal certain similarities and differences. When they decrease in voltage, DC hypnosis records cannot be distinguished from DC sleep tracings. Drowsy states cause a decrease in standing potentials. Sodium amytal narcosis seems to produce less dramatic records unless associated with general excitability; voltage shifts of considerable magnitude which sometimes accompany hypnosis induction are seldom present, and the gradual wearing off of the drug effect precludes any considerable terminal shifts in voltage.

As measured electrometrically, the depth of hypnosis does not appear to be correlated with ability to develop amnesia or other phenomena, frequently necessary for good therapeutic or experimental trances, but only with the magnitude of relative voltage change (whether increased or decreased) from that of the waking pattern and the amount of smoothing. Any disturbance of the hypnotic state can be detected immediately by changes in voltage and in tracing configuration. Thus, for the first time, it seems possible to measure changes in depth of hypnosis objectively.

Although there is no conclusive evidence to demonstrate the role played by the nervous system, it is felt that standing potentials measure one aspect of quasi-electro-

static field phenomena, which may represent summated potentials of the bimolecular layers surrounding cells.—*Author's abstract.*

CEREBROSPINAL FLUID

See Contents for Related Articles

CONVULSIVE DISORDERS

Intellectual and Emotional Make-up of the Epileptic. F. T. ZIMMERMAN, BESSIE B. BURGEMEISTER, AND T. J. PUTNAM, New York, N. Y. Arch. Neurol. & Psychiat. 65:545-56, May 1951.

The fields of epilepsy and mental retardation have engaged our interest for a number of years because we feel that a study of these clinical conditions may throw light upon the mechanism of conscious awareness in man. Our present paper summarizes five years research on the relation between epilepsy, intelligence, and personality as indicated by various objective psychologic tests, supplemented by extensive clinical data. It represents an effort to attack the problem of epilepsy as a whole—psychologically as well as physiologically. As such, epilepsy may be understood and treated only as an indivisible whole.

Our data were abstracted from 300 case records from the Neurological Institute, Columbia-Presbyterian Medical Center. The cases represent equal proportions of private and ward patients admitted to the hospital for observation and workup and, we believe, constitute a fairly good random sample of the general population. Two hundred of our patients are adults. One hundred are children and adolescents. We divided our cases according to the following etiology, based upon the commonly accepted types of seizures: idiopathic petit mal; idiopathic petit mal and grand mal; idiopathic grand mal; symptomatic; and traumatic epilepsy.

Our findings indicate that when etiologic classification is used as the criterion of differentiation, a relationship is found between the epileptic seizure-type and intelligence and personality. Petit mal epilepsy, with its transitory lapses of consciousness and relatively mild clinical manifestations, shows the highest intelligence quotient level and the least amount of personality deviation; as one descends along the gradient of severer types of seizures, the intelligence quotient is lower and the personality deviations are more marked. The intelligence quotient is higher among children if the onset of the grand mal seizure appears later than if it appears earlier in the child's life. Our Rorschach records seem to demonstrate some degree of "organicness" even among the idiopathic types, interference with mental functioning being most marked in our symptomatic and traumatic groups. All of the above conclusions were made possible by a method of classification which utilizes finer degrees of differentiation than the older dichotomy of "organic-nonorganic" epilepsy. We are convinced from our findings that differences in degree of interference with mental functioning and with personality adjustment do exist among patients with epilepsy, and that these may be detected on intelligence and personality tests. 16 references. 2 figures. 4 tables.—*Author's abstract.*

DEGENERATIVE DISEASES OF THE NERVOUS SYSTEM

Accident Proneness in Multiple Sclerosis: Relationship to Trauma, with Medicolegal Implications. A. E. BENNETT, Berkeley, Calif. J. Nerv. & Ment. Dis. *113*:198-209, March 1951.

Although the etiology of multiple sclerosis is unknown and medical evidence does not support trauma as a causal or contributing factor, many claimants have won large settlements or total disability compensation in the courts on the ground that an accident caused or aggravated the disease. Reasons for this confusion are the failure to understand: (1) the clinical course of the disease, with its spontaneous remissions and progressive pathology; (2) such early symptoms as motor paresis, ataxia, and disturbed equilibrium, which predispose the patient toward accidents; and (3) the peculiar type of personality changes, with euphoria, eutonia, and the resulting poor judgment which induces the patient to ignore his symptoms. Multiple sclerotics are, therefore, prone to accidents which they in turn blame for new or exacerbated symptoms. This complex of factors is the basis for misinterpretation and the allowance of large awards for disability.

In one of the 3 cases reported from the author's personal medico-legal experience, unqualified medical testimony presumably influenced the result, the allowance of compensation. The second case was dismissed, despite the attempt of the claimant's physician to calculate how much the accident had shortened the remissional period. In the third case, noncompensable surgery and other trauma were ignored, whereas a fall on ice was deemed to have aggravated the existing condition of multiple sclerosis. The precedent of case 2 accounted in part for the dismissal of the claim; upon appeal the case was settled for a small sum out of court. Of the 17 cases collected from other sources, 11 were settled for and 6 against the claimant. In only 6 of the entire 20 cases was there no presumptive evidence of preexisting disease, and in only 1 case was the accident moderately severe. Without clear evidence of structural neural damage, one has to assume a psychic relationship between trauma and multiple sclerosis.

Further study of the relationship of trauma to neurologic diseases and a clarified medical opinion are needed to guide courts in these decisions. Some neurologists have certified that an accident aggravated existing symptoms of multiple sclerosis or terminated a remission, thus contravening medical facts upon the variable course and unpredictable character of the disease. It is significant that the many procedures to be elicited in the usual case history such as accident, operation, injury, or illness, which involve no question of compensation, are not regarded as traumatic. Partisan expert testimony, adroit use of hypothetical questions, textbook excerpts quoted out of context, and sympathy with a badly disabled claimant often bias decisions regarding compensation in these cases.

To correct these weaknesses, the author recommends a long term investigation by suitable medical bodies of the relationship of trauma to various neurologic diseases; the use of expert neutral witnesses qualified to render a clear, free statement of medical evidence; and elimination of such devices as the hypothetical ques-

tion, isolated textbook quotations, and partisan medical testimony. To replace the present method of retaining experts expected to testify favorably for the side retaining them, neutral witnesses should be drawn from a panel of qualified neurologists certified by a medical society. 32 references.—*Author's abstract.*

DISEASES AND INJURIES OF THE SPINAL CORD AND PERIPHERAL NERVES

Physiologic Observations on Spinal Cord Function in Paraplegics. R. A. KUHN, Madison, Wis. J. Nerv. & Ment. Dis. *113*:301-14, April 1951.

Reflex activity below the level of cord lesion was studied in 29 men with surgically verified complete spinal cord transection.

Reflex activity below a total division of the human cord progresses, characteristically, through stages of spinal shock, minimal reflex activity, flexor spasms, and alternating flexor and extensor spasms. The majority of the men eventually reach a stage of predominant extensor activity, and that state probably represents the typical, uncomplicated outcome of cord transection.

Although sudden total division of the human cord results in immediate abolition of tendon reflexes below the level of transection, certain other reflexes may or may not survive unaltered from the moment of injury. Spinal shock, studied in 2 subjects, was characterized by a complete absence of reflex activity below the level of cord division immediately following injury.

Reflex flexor activity in spinal men appears first at the distal parts of the limbs and successively involves the more proximal skeletal musculature. The genital zone and plantar surfaces are cutaneous areas of lowest threshold, and the flexor muscles activated by stimulation appear to be the same as those excited by similar stimuli in the spinal dog and cat, if the adductors of the thigh are included in that group.

Reflex extensor activity was produced most effectively by proprioceptive stimuli, in particular, by sudden stretch of the iliopsoas muscle.

The isolated human spinal cord appears to be capable of mediating responses to thermal stimuli.

It seems certain that many of the discrepancies between these findings and those of earlier investigators can be explained by the greater duration of life and, secondarily, by the better physical condition of spinal men studied in recent years. 14 references, 4 figures.—*Author's abstract.*

Rehabilitation of Peripheral Nerve Injuries. A. GHIORA, Jerusalem, Israel. Harefuah *40*:83-84, March 15, 1951.

A brief outline of rehabilitation in peripheral nerve injuries is given, as it has been carried out in 85 cases for a period of 18 months. For the achievement of physical, mental, social, vocational, and economic readjustment of the disabled, a concerted teamwork of medical and paramedical workers was indispensable. Special consideration had to be devoted to physical and occupational therapy. Weekly staff conferences have been held, attended by the psychiatrist, occupational therapist, neuro-

psychiatrist, orthopedic surgeon, neurosurgeon, vocational training expert, and social worker. The value of functional versus anatomic rehabilitation has been stressed, and the indication of acceptable "trick-movements" has been formulated. A strong argument is brought against undue prolongation of the period of medical rehabilitation and for the promotion of early vocational retraining, whenever necessary.

It is difficult to assess statistically the results of rehabilitation in a comparatively small group composed of patients of both sexes, civilians and soldiers, with the most variable disablement as to localisation and graveness of the injury, and also because of special circumstances of the country where a number of new immigrants and students had to be dealt with, all in need of vocational training.

The overall survey shows 37 patients (43.5 per cent) who were back to work within 6 months of their being injured, 26 (30.7 per cent) who began working within 7-12 months after their injury, 15 (17.6 per cent) who were still in treatment (including vocational training) after 18 months, 4 (4.7 per cent) who have been transferred to other care and not heard of further, 3 (3.5 per cent) who have been failures. Of those 63, who returned to work within a year, 19 (30.1 per cent) carried on with their previous occupation, whereas 44 (69.9 per cent) were forced to change work, as a consequence of their disablement. 9 references.—*Author's abstract.*

Defects in Regulatory Mechanisms of Autonomic Function in Injuries to Spinal Cord. L. J. POLLOCK, B. BOSHES, H. CHOR, I. FINKELMAN, A. J. ARIEFF AND M. BROWN, Chicago, Ill. J. Neurophysiol. *14*:85-93, March 1951.

Excitatory, inhibitory, and regulatory impulses from the suprasegmental levels, cortex, diencephalon, medulla, and other parts fail to reach their appropriate levels for autonomic function when the cervical spinal cord is severely injured.

Such autonomic nervous system activity as results from reflex stimulation in the distal end of the injured spinal cord is uninhibited, and the changes brought about are greater than in normal man. Thus the increase in blood pressure resulting from immersing the foot in cold water, or from distension of the urinary bladder or rectum, is far in excess of normal. Orthostatic hypotension is exaggerated to the point of producing unconsciousness. Sweating, resulting from distension of the urinary bladder, is excessive. Absence of central regulation of temperature results in a state of poikilothermia and of water metabolism in diabetes insipidus. 2 references. 7 graphs.—*Author's abstract.*

Electrotherapy in Experimentally Produced Lesions of Peripheral Nerves. LEWIS J. POLLOCK, ALEZ J. ARIEFF, IRVING C. SHERMAN, MAURICE SCHILLER, ELI TIGAY, FREDERICK HILLER, ERICH LIEBERT AND GEORGE K. YACORZYNSKI, Chicago, Ill. Arch. Phys. Med. *32*:377-87, June 1951.

After primary suture of one sciatic nerve in the cat, there is no statistically significant difference in the percentage loss of weight of the gastrocnemius muscle when it is either untreated or treated by massage and passive movement combined

with electrotherapy for 5 or 15 minutes, at varying intervals, from 30 to 180 days after operation.

The same was true for bilateral primary suture of the sciatic nerves 45 and 75 days after suture.

After 30, 60, 90, and 120 days following bilateral denervation, there was a small but statistically significant larger weight to the electrically treated muscles. This superior weight did not increase with time and probably may be explained on the basis of generalized lessening of the activity of the cat.

Furthermore, we were unable to confirm the results of Gutmann and Guttmann in the rabbit when, after section and suture of the peroneal nerve of the cat, the tibialis muscle complex was treated by electrical stimuli. There was no retardation of atrophy or facilitation of recovery of the bulk of the muscle.

The weight of the denervated gastrocnemius plantaris complex of an extremity of the rat which was treated by electrical stimulus was uniformly greater than that of the untreated side.

The failure to find any statistically significant difference between the weight of treated and untreated denervated muscles in the cat and the uniform excess of weight of the treated denervated muscle in the rat suggests a species difference in response to electrotherapy.

Greater numbers of contractures of greater severity occurred in the normal antagonistic gastrocnemius muscle when an extremity, after peroneal nerve section and suture, was treated by electrical stimuli. This was also found in the experiment on the sciatic nerve. The cause for this is unknown. The gastrocnemius muscles of the cats, examined 90 days after primary suture of the sciatic nerve, show marked variations in the histopathologic picture. These variations are present in muscles whether treated or not. 19 references. 2 tables.—*Author's abstract.*

ELECTROENCEPHALOGRAPHY

See Contents for Related Articles

HEAD INJURIES

Disability Caused By Brain Wounds. W. R. RUSSEL, Oxford, England. J. Neurol., Neurosurg. & Psychiat. *14*:35-39, Feb. 1951.

This paper summarizes a detailed study of over 1000 cases of head wound, which included over 800 surviving cases of wounds which penetrated the brain. The follow-up study has been carefully planned through the use of an advice bureau for cases of head injury, and most of the cases have been followed up for over 5 years after injury. The main features of each case were transferred to a "paramount" card to facilitate analysis.

Fourteen tables are used to indicate the main data from this analysis. For example, there were 217 cases with aphasia early after injury; this persisted to a variable extent in 135 cases. In the latter group, the site of injury was the left in all but 7 cases.

The incidence of epilepsy is already 43 per cent of all "penetrators," and this figure will clearly be about 50 per cent in another ten years. The improvements in surgery and the low incidence of infection do not, therefore, appear to have reduced the incidence of post-traumatic epilepsy as compared to cases from the first World War. It is suggested that a 50 per cent incidence of post-traumatic epilepsy suggests the anatomic disturbance of two opposing factors in cerebral physiology, such as stimulation and suppression.

Finally, the social follow-up of these pensioners is described. Eighty-one per cent are gainfully employed, and many of the remainder are leading a useful life. Methods of providing employment for severe cases of hemiplegia are described. 4 references. 14 tables.—*Author's abstract.*

INFECTIOUS AND TOXIC DISEASES OF THE NERVOUS SYSTEM

Electrophoretic Studies of Plasma and Serum Proteins in Anterior Poliomyelitis. J. I. ROUTH AND W. D. PAUL, Iowa City, Iowa. Arch. Phys. Med. *32*:397-400, June 1951.

The results of electrophoretic analyses of plasma from 103 patients and serum from 33 patients with poliomyelitis were compared with those from normal individuals. For purposes of comparison, patients were classified according to the severity of the disease.

The albumin content of the plasma was decreased in all types of poliomyelitis with the decrease roughly proportional to the severity of the disease. The $alpha_1$ globulin increased over normal in all types of poliomyelitis. The $alpha_2$ globulin and fibrinogen both increased over normal, and the increase was roughly proportional to the severity of the disease. The beta globulin component remained essentially normal. The gamma globulin of plasma showed a definite decrease when compared to normal, an unusual finding in any disease.

The changes in the serum proteins were similar to those observed in the plasma samples. The gamma globulin component was essentially normal in poliomyelitis. The albumin globulin ratio of both plasma and serum was definitely decreased in all types of poliomyelitis, with the decrease roughly proportional to the severity of the disease. 8 references. 2 figures. 2 tables.—*Author's abstract.*

Encephalomyocarditis acuta—a Disease sui generis? RUMAR BRENNING, Stockholm, Sweden. Acta Soc. Med. Upsaliensis. *56*:51-7, April 1951.

On the basis of the 3 cases recorded, the following may be maintained concerning acute encephalomyocarditis:

1. that the malady begins rather suddenly with tiredness, giddiness, and keen anxiety, having a pronounced motor component;

2. that simultaneously, or at some later time, rather marked subjective heart troubles set in, concomitant with a more or less pronounced insufficiency of circulation;

3. that two of the cases revealed objective symptoms of encephalitis in the form of reflex disorders, one of these cases showing slight pathologic symptoms from the cranial nerves;

4. that all the cases presented systolic murmurs and, when examined by x-ray, an enlargement of the heart of a myocarditis type (this may have been prevalent prior to the inception of the illness, in which connection it should also be pointed out that prior to that all the patients were entirely without any heart trouble);

5. that, in their initial stages, two of the cases presented slight gastrointestinal symptoms and all of them 3-6 per cent of eosinophile cells;

6. that the disease is rather benign, but extremely protracted, lasting for years, and permitting an almost complete capacity for carrying out work, although with somewhat decreased vitality and a certain tendency to periodic giddiness. Some reflex disturbances persist. 3 references.—*Author's abstract.*

Studies on Increased Vasomotor Tone in the Lower Extremities Following Anterior Poliomyelitis. FREDERIC J. KOTTKE AND G. K. STILLWELL, Minneapolis, Minn. Arch. Phys. Med. *32*:401-407, June 1951.

Disturbances of the circulation of the lower extremities with cyanosis on dependency or in the cold, hyperhidrosis, trophic changes in the skin and nails, edema, and hyperesthesia are occasionally sequellae of anterior poliomyelitis. They are believed to be due to overactivity of the sympathetic nervous system with a resultant increase in vasomotor tone. The condition is most troublesome in a cold environment but, with more severe cases, may bother the patient even on a sudden change from a hot to a moderate, ambient temperature; the coldness of the lower extremities may extend above the knees.

A series of 18 cases, seen at the University of Minnesota Hospital's Poliomyelitis Clinic, is reported, with a tabulation of the extent and duration of muscular involvement by poliomyelitis and of vasomotor symptomatology. Extensive skin temperature studies were made on some of these patients to evaluate their resistance to reflex vasodilation in the lower extremities when heat was applied to the trunk in an ambient temperature of 21.5 C. Dihydrogenated ergot alkaloids and/or priscoline were found to reduce the vasomotor tone to more normal levels.

The drugs were employed therapeutically in 9 of the 18 patients, with a favorable response in all but one. Benefits to the patients included increased freedom of activity in winter, more effective muscle function, reduction or abolition of edema of the feet and decreased insomnia. Some did not tolerate priscoline very well. The drugs provide a convenient solution to the problem. 6 references. 3 figures. 1 table.—*Author's abstract.*

INTRACRANIAL TUMORS

See Contents for Related Articles

NEUROPATHOLOGY

See Contents for Related Articles

NEURORADIOLOGY

See Contents for Related Articles

SYPHILIS OF THE NERVOUS SYSTEM

See Contents for Related Articles

TREATMENT

Treatment of Myasthenia Gravis with Octamethyl Pyrophosphoramide. J. A. RIDER, S. SCHULMAN, R. B. RICHTER, H. C. MOELLER AND K. P. DUBOIS, Chicago, Ill. J.A.M.A. *145*:967-72, March 31, 1951.

Octamethyl pyrophosophoramide, a stable and relatively nontoxic anticholinesterase agent, was used in the treatment of 6 myasthenia gravis patients. Four of these were successfully converted from their previous neostigmine therapy to this new drug. In these 4 patients, the new drug had the advantage that two oral doses of from 9.5 to 18 mg. a day resulted in evenly maintained strength, which was generally greater than the maximal strength obtained with neostigmine. There was a mutual potentiation of side effects when neostigmine and the new drug were taken together. This was most marked in patients with severe myasthenia gravis. Serum and red cell cholinesterase determinations were found to be useful as a guide in dosage regulation during the period of transfer from neostigmine to the new drug. After the range of the maintenance dose was established, however, minor variations in the requirement of the new drug were not accompanied with changes in blood cholinesterase activity. There was no correlation between the severity of the disease or the neostigmine requirement on the one hand and the dose of the new drug on the other, and it was felt that those patients who obtained little benefit from even large amounts of neostigmine would probably get little additional benefit from the new drug. 7 references. 3 figures.—*Author's abstract.*

Cortisone in Sydenham's Chorea. N. ARONSON, H. S. DOUGLAS AND J. M. LEWIS, New York, N. Y. J.A.M.A. *145*:30-33, Jan. 6, 1951.

Since the beneficial effects of cortisone and ACTH on the acute manifestations of rheumatic fever have recently been described, it was considered of interest to determine the effects of these agents on two cases of chorea. Both patients appeared to have active rheumatic fever because, in addition to chorea, they had elevated sedimentation rates and erythema multiforme.

Case I was a three year old boy whose cortisone treatment was begun four weeks after the onset of chorea. He received 0.975 Gm. cortisone in 14 days, and during this time his clinical status remained essentially unchanged.

Case II was a nine year old boy whose cortisone therapy was started two weeks after the onset of chorea. Over a 20 day period, a total of 2.175 Gm. of cortisone was given, but the symptoms of chorea not only failed to subside but became progressively worse. The use of ACTH was started on the day that the administration of cortisone was discontinued. A total dosage of 0.925 Gm. was given over a nine day period. During this time, there occurred a gradual but slight improvement, but, at the conclusion of therapy, mild to moderate chorea was still present.

It is concluded that cortisone and ACTH did not favorably influence the course of chorea in these patients. 5 references. 2 tables.—*Author's abstract.*

The Obese Character: Psychodynamics and Psychotherapy as an Adjunct to Medical Management. ALFRED BLAZER, New York, N. Y. Internat. Rec. Med. *8*:24-30, Jan. 1951.

The author reviewed one hundred unselected cases of psychogenic obesity to determine their common characteristics, if any. A psychologic study and a five year follow-up were made of these patients. Review showed that a basic set of psychodynamics was present in every one of the cases studied, as illustrated by a typical case history.

The patient, Anna, was 25 years old, 5 feet 6 inches tall and weighed 220 pounds. She had just been divorced after a short-lived marriage. The patient was interviewed twice a week over a period of one year. Her father, mother, and younger sister were also interviewed, as was her husband.

"Her mother was a domineering, self-centered, power-driven personality who had a casual, premarital sexual relationship with the father. The father—an educated, detached, submissive, retiring sort of person—was socially above the station of the mother and had taken the affair lightly with no intention of marriage. The mother, who had no real interest in having a child, managed to become pregnant when the affair was almost over."

The patient remembered fierce quarrels over this and the father's contention that he had been trapped into the marriage. Countering, the wife assumed a maternal martyr role.

The patient had always been a feeding problem. "The more her power-driven and frustrated mother rammed the food down Anna's throat, the more Anna vomited it back or had diarrhea." The only way to ease the mother's feelings of guilt over not being able to give the patient the love, tenderness and care the child needed seemed to be to passionately feed her.

"By the time Anna was 16 months old eating had become emotionally charged. Vomiting and diarrhea were unconsciously her only defensive devices. Thus she repudiated this counterfeit interest that her mother offered."

At this time another child was born. The "emotional *sturm and drang*" which had existed at the time of the patient's birth was changed; the condition of the "marriage trap" no longer existed. The younger child was fussed over by the parents and grandparents and "poor Anna was left in the cold."

Shortly after the birth of the new child, the patient began to eat a great deal. "Her unconscious defences were reversed. No vomiting, no diarrhea . . . Within a year Anna became an overweight problem."

By the time the patient had reached adolescence, and with complicating sexual factors, she had become quieter, reserved and withdrawn. Her ability to be close to people decreased and, "relegated to isolation by her stoutness," she began to go on solitary eating bouts as a drinker would go on a binge. "She felt inferior and inadequate and had a self-derogatory attitude, with a feeling of helplessness and dependency."

"The core of the problem [of] the compulsive eater [is that] unconsciously she has given up the struggle to preserve a non-derogatory attitude toward herself, and is only able to have a shallow, defensive rapport with others. In the same way her work life

is routine, her creativeness is half-hearted and self-depreciatory. But since all human beings must have some kind of security if they are to survive, she retreats to an earlier stage, historically, in her emotional development to the unweaned level where the nipple and emotional security were one and the same thing." 4 references.

Recent Advances in Treatment of Migraine. ARNOLD P. FRIEDMAN AND THEODORE J. C. von STORCH, New York, N. Y. J.A.M.A. *145*:1325-29, April 28, 1951.

Over 600 patients with migraine headaches were treated and observed for a period of one to four years. A variety of therapeutic approaches were investigated during this study. In the treatment of migraine, the physician has four main methods which can be used alone or in combination: pharmacotherapy, physiotherapy, surgery, and psychotherapy.

It is our impression that the treatment of migraine is a complex, individualized procedure. Symptomatic treatment is essentially one of pharmacotherapy, and the best results have been obtained by the use of the ergotamine derivatives, notably a compound of ergotamine and caffeine (Cafergot). Prevention of an attack is best accomplished by psychotherapy. However, the use of certain sympatholytic drugs may hold some promise. The treatment of migraine has now reached a point where, in most instances, the practitioner can favorably modify the frequency and severity of the patient's headaches. 8 references. 3 figures. 2 tables.—*Author's abstract.*

book reviews

ESSAY ON THE CEREBRAL CORTEX. Gerhardt von Bonin. Springfield, Illinois, Charles C. Thomas, 1950. Price $3.75.

This challenging little book reviews the functional organization of the cerebral cortex in a refreshing and thoroughly modern way. In the author's own words, the central mood of the essay springs from the conviction that structure should be understood as an enduring order impressed upon a flow of energy. The author has introduced many new points of view as applied to the cerebral cortex, including those of Norbert Wiener on servo-mechanisms and negative entropy. The author visualizes the cortex as a random aggregate of neurons to all of which the same properties are ascribed. "For such a theory the relevant quantity is not the distribution of energy but the degree of orderliness established in the pattern of activity."

The author subdivides the cortex into functional regions, based on thalamocortical relations, following somewhat the divisions of Von Economo and Koskinas. Thus the frontal region is related to the medial nucleus, the parietotemporal region to the pulvinar, the limbic region to the anterior nucleus, etc. This is a new and interesting treatment of the subject which, although highly speculative, comes close to a functional type of parcellation.

Chapters entitled "sensation," "action," "prediction," and "emotion" are used to discuss these specific aspects of cortical function.

This essay should be of interest not only to the neurologist and psychiatrist but also to those scientists in other fields who are endeavoring to gain more insight into the workings of the human brain.—*George D. Weickhardt, M.D.*

THE WRITER AND PSYCHOANALYSIS. Edmund Bergler. Doubleday, 1950. 265 pp. Price $3.50.

It was inevitable that when the investigative tools of psychoanalysis were developed, they should have been seen as a promising avenue of research into the nature of the creative process. Bergler divides artistic creation into two acts, the providing of the "idea" from unconscious sources, and the secondary elaboration in consciousness, only the former of which is the province of the analyst. His theories are based on his concept that the unconscious Super-Ego is the decisive part of the personality, "the battle with the conscience" leading to either normalcy, neurotic symptom, or artistic productivity.

Believing writing to be a special sublimatory process, the author expounds a rigid, procrustean, five-layer theory of sublimation. Basic in the development of the neurotic and the writer is the failure to adequately resolve aggression resulting from offense to the infantile omnipotence (impact of reality) and the ingenious transformation of displeasure to pleasure—"psychic masochism." The reproach of conscience at this device leads to "alibis" patterned in the "mechanism of orality." Here Bergler differs from most analysts in feeling that orally regressed people do not desire to "get" but rather to be refused, and the mechanism is broken down as follows:

1. Provokes a situation of refusal or denial by the pre-oedipal mother substitute (unconscious).

2. Seeing only the cruelty of the "bad mother," responds with aggression (pseudo-aggression) and righteous indignation (conscious).

3. Conscious self-pity (unconscious pleasure in psychic masochism).

The artist belongs to a group where this pre-oedipal, pregenital resolution of the mother-child relationship is established so that the Oedipus complex is not decisive for the writer, and he is thrown back to the oral stage. The neurotic repeats the early relationship with someone other than himself in the present. Although writers belong to this group of masochistic "injustice collectors," there is one pathognomonic twist: masochistic dependence is denied, and the wish to get is affirmed defensively; the need of the mother for getting is denied, and a self-sufficient "giving-mother: receiving-child" autarchy is affirmed. If these "alibis" satisfy the inner conscience, the writer is productive, for "work equals milk." Writing is a victory in the battle of the conscience, the "alibi" having been accepted. The defenses set up against the pseudo-aggression are what is represented in the writer's production, and the writing constitutes a self-cure. Guilt is shifted from the deeper psychic masochism to the more easily handled pseudo-aggression. Acceptance of the work by the reader unconsciously implies to the writer a sharing of the unconscious guilt.

Another conflict of the writer is with his voyeurism, the drive underlying imagination. When this gets past the Super-Ego he goes through the defense of exhibitionism, which, if accepted, becomes writing. The response to voyeurism with exhibitionism is equivalent to the response to psychic masochism with pseudo-aggression.

There is a brief chapter in which the frequent combinations of writing, alcoholism, and homosexuality are discussed in the light of their common origin in the

oral conflict. The author is more convincing when he turns from evidence in literature to data derived from his series of 36 writers treated for one to two years during the past 20 years, most coming to treatment for "writer's block." This condition is established when the inner conscience reflects the alibi and substitute alibi. The autarchy may break down, and energy is rechannelized from productivity to neurotic defenses; from being the giving mother, he is the refusing child. When the deeper voyeurism is repressed, it cannot be transformed into exhibitionism; when the other orally based traits become predominant, the energy of the writer is diverted from the productive defense of writing.

Several chapters apply these theses with varying degrees of credibility. For instance, it is difficult to see the distinction between some of the enumerated forms of plagiarism and the normal process of learning from others, the transmission of culture. (The author seems to fit two of his descriptive categories, the quotation specialist and the hunter of plagiarisms.)

A useful attack is made on the "impersonality" vaunted by many writers, literary and scientific, in the chapter of the "Myth of Objectivity." The chapter on the writer's relation to society does not make this very clear, and the question of human dignity in chapter XIII is explained through a not credibly drawn connection with childhood narcissism.

The last chapter on unproductivity and the treatment of writer's block is one of the shortest and least informative, the aim being stated as enabling the Ego to "wrest the maximum from the Super-Ego." Technics are left to the therapist's imagination, but Bergler urges adopting his specific dynamic orientation and not uncovering superficial defenses alone.

This book is a distillation of a number of earlier publications by the author, liberally quoted and reworked; considering the author's claim of 100 per cent cure in all of his cases of writer's block, it may suggest a useful approach for those with similar therapeutic problems. As to understanding the creative process, a stimulating, controversial question has been raised.—*Anthony J. Brunse, M.D.*

PSYCHIATRIC ASPECTS OF JUVENILE DELINQUENCY. Lucien Bovet. Geneva, World Health Organization, 1951. 92 pp. Price $1.00 (5 shillings or 4 Swiss fr.).

This monograph, the first of a series, has been prepared by an experienced Swiss psychiatrist, whose work has brought him into close contact with the problems of juvenile delinquency. He points out, first of all, that whereas, according to law, juvenile delinquents form a homogeneous group, according to the psychiatrist, they comprise various types of socially maladjusted children. Whether the criminal tendencies of these delinquents derive from adverse social factors, uncertain material or emotional conditions, or instability through psychologic disturbances, they inevitably lead to feelings of insecurity, out of which are born anxiety, followed in a vicious circle by aggressiveness, feelings of guilt, and further anxiety.

Any rational prophylaxis must be directed against the basic disorders, of which juvenile delinquency is a sign. The problem can be approached most successfully through close cooperation between doctors, psychologists, social workers, re-educa-

tors, and magistrates, as in the existing child-guidance teams. In fact, juvenile delinquency must become the starting point and raison d'etre of a vast mental health campaign.

These few conclusions are drawn from Dr. Bovet's extensive review of the established facts and generally accepted theories on juvenile delinquency, its etiology, prevention, and treatment. The impressions gathered during a tour of America and Europe, where Dr. Bovet consulted over 150 specialists on juvenile delinquency and visited many institutes, to help to make this an up-to-date account, the object of which has been to indicate the multiplicity of problems involved rather than to solve them.

The report was prepared on behalf of the World Health Organization as a contribution to the United Nations program for the prevention of crime and the treatment of offenders. It is written, therefore, not merely for the specialist but for the intelligent reader who is aware of the vital importance of this problem.—*Winfred Overholser, M.D.*

PROBLEMS IN CEREBELLAR PHYSIOLOGY. G. Morruzzi. Springfield, Ill., Charles C. Thomas, 1950. 125 pp. Price $3.25.

This monograph consists of a series of lectures which the author delivered at Northwestern University Medical School in 1948. Dr. Morruzzi is Professor of Physiology at the University of Pisa, Pisa, Italy. The author's original work on cerebellar physiology has been published in numerous articles in the Italian medical literature. The lectures are primarily concerned with the functional relationships of the anterior lobe of the cerebellum. In addition to a consideration of cerebellar inhibition and facilitation of postural tonus, there is a discussion of cerebellar influences on the cerebral cortex and autonomic system. The work should be of interest primarily to neurophysiologists.—*George D. Weickhardt, M.D.*

GENERAL THEORY OF NEUROSES. Rudolf Brun. New York, International Universities Press, 1951. 469 pp. Price $10.00.

Dr. Brun, a Swiss psychoanalyst whose views are not entirely representative of current psychoanalytic thought, originally presented this material as a series of lectures. The material was then published in 1942. The present volume is a translation of the second, 1946 edition. Essentially, the book presents psychoanalytic theory with considerable, although not entirely pertinent, elaboration of biology. The preface states, ". . . while giving full consideration to the psychological aspects [he] endeavors above all to incorporate the theory of the neuroses in a general medical and biological setting."

Unlike most current psychoanalytic literature, Brun adheres quite literally to earlier formulations. Whereas Freudian literature referred generally to an organic substrate, Brun is explicit in attempting to correlate biochemical and physiologic processes with neurotic disorders. This is particularly true in regard to the "actual" neuroses (as neurasthenia and anxiety neurosis) which, according to the author, are

produced by direct mechanical or toxic disturbances in the region of the vegetative cerebral centers. Excessive space is devoted to describing a sketchy neuro-hormonal physiology as though it actually explained the processes of emotional disorders. Brun also supports an old theory that disturbances in the choroid plexus and alterations in the blood—spinal fluid barrier are important etiologic factors. He notes, however, that emotional shocks may evoke physical disturbances which then give rise to a neurosis. Thus, there is little rationale for psychotherapy of the actual neuroses, except that there may be an overlay of secondary psychologic reactions.

There is further effort to demonstrate a biological basis for the theory in the lengthy discussions of instincts, heredity, and constitution. Brun expresses conviction that there must be an inherited predisposition to neurosis. Although the cause of neurasthenia and anxiety neurosis is predominantly toxic, he adds that such patients are generally neuropaths who are more prone to intensive neurovegetative reactions. Even in hysteria, a psychogenic disorder, the predisposition is a congenital or acquired hyperexcitability of the hypothalamic formations. The hereditary predisposition is, in part, an abnormality in the formation of the innate instinctual constitution. As though in confirmation of these concepts, the author cites some old studies of instinctive behavior in ants. Instincts are said to enhance excitability and exert a selective influence over what is experienced and how it is experienced: "We really experience intensively only what our instinctual constitution is willing to experience."

The latter part of the book is an exposition of psychoanalytic concepts of psychosexual development, unconscious mental activity, symptom formation and psychodynamics. These portions and the discussion of the "genuine" psychoneuroses are clear presentations of more widely accepted views.

Although the author professes to take a middle ground between the strict organic and strict psychogenic standpoints, he places an undue stress on pseudo-explanatory physiology and marked emphasis on hereditary and constitutional factors. There is a chapter on the acquisition of cultural inhibitions, but the treatment of social factors is notably deficient. In general, much of the book is biased and out of date.—*Norman Taub, M.D.*

SOVIET PSYCHIATRY. Joseph Wortis. Baltimore, The Williams & Wilkins Company. 1950. 314 pp. Price $5.00.

This book offers a comprehensive review of present-day psychology and psychiatry in Soviet Russia. Dr. Wortis traces the development and practical application of the prevalent psychologic and psychiatric concepts and relates them essentially to the basic principles underlying the Soviet social-economic structure. It is not surprising, therefore, that the first chapter deals with "dialectical materialism." The concise and clear description of its meaning is to be appreciated by the general reader, not grounded in Marxism, whose curiosity is the more aroused, as references to "dialectical materialism" more often than not are emotionally colored, implying either evil or blessing. Then, because of the specific relationship of the subject matter of this volume to dialectical materialism, this enlightening chapter deserves particular attention.

It is to the credit of the author that his avowed sympathetic interest in the subject apparently does not handicap his serious attempt, above all, to present factual material, as gathered from representative writings of the psychologic and psychiatric literature. The material, therefore, consists largely of extensive abstracts from text books, articles, and other original documents. Dr. Wortis does not limit himself, however, to mere reporting; he synthesizes, interprets, and comments abundantly.

The book covers the principal aspects of Psychiatry: clinical psychiatry; organization of psychiatric care; child psychiatry; psychiatry, morality, and the law; research; treatment; a special chapter on psychoanalysis and psychotherapy. The reader is also given the opportunity to read certain material in the Appendix translated more completely than in the text.

The following trends in Soviet psychiatry are pointed out:

1. The organic approach, as commonly understood, and as inherent in the Pavlovian school of conditioned reflex. Both, to my knowledge, were inherited from the prerevolutionary era when Russian medicine had traditionally been under the strong influence of German medicine and the organic approach in German psychiatry had been reflected equally in Russian psychiatry.

Pavlov's conditioned reflex, as applied to psychology and psychopathology, was preceded by Bechterev's "Psychoreflexology," which again had flourished in the last decades of he Tsarist regime. Bechterev denounced "mental" and "consciousness" in unambiguous and biting terms: "Psychoreflexology holds the key to those functions which we have, since time immemorial, called mental and which are surrounded by the halo of the immaterial or 'spiritual,' but which are now explained as reflex activities of the organism." He further specified that "The neuropsyche is the subject matter of the new science of psychoreflexology which fundamentally eliminates all methods of introspection. Consciousness is, therefore, no longer a criterion of the mental; the criterion is experience, that is, the conditioning of the conduct upon the basis of previous experiences. Neuropsychic processes are reflexes."*

Pavlov, on the other hand, had a more realistic understanding of, and attitude towards psychology. He was gratified with and proud of the recognition by psychologists of the close kinship between association psychology and conditioned reflex, the latter providing a firm basis for the former. As to Pavlov's explanation of neuroses and psychoses in terms of impairment of the normal balance between nervous excitation and inhibition, it suffers, it seems to me, from "dogmatic adherence to one concept in trying to understand complex and heterogenous phenomena."† This critical remark does not alter the fact that Pavlov's teaching, which has been greatly favored and lavishly subsidized by Soviet Russia, throws light on the mechanism of certain aspects of personality reactions, normal and abnormal, and is helpful in psychotherapy.

2. The all-pervading influence of the social environment on the psychology of the individual. Unlike the "bourgeois" psychology and psychopathology, which considers past life experiences, particularly early childhood experiences, as the most significant

*Russian Psychoreflexology. Richard Müller-Freienfels.

†Scientific Monthly, July, 1942. p. 85.

factors determining normal and abnormal personality function, Soviet psychology and psychopathology regard the influences deriving from the individual's status in the society as the most significant psychodynamic factors: the "haves" and the "have-nots" feel and think differently.

Freudian psychoanalysis is, therefore, regarded as "ultra-individualistic, as minimizing the influence of environment on human behavior." It is consequently severely criticized and has no recognized status in Soviet psychology and psychopathology. The outstanding Soviet psychiatrist, Giliarovskii, states that, upon elimination of the remnants of capitalist psychology, a new man will come into being, "a man who places above everything not his egotistic interests, but the interests of the entire collective of the socialist society. Therein lies the promise of the future health of man."

It is safe to assert that the prevalent American psychology and psychiatry, as a matter of course, fully recognizes the potent influence of the immediate surroundings and of the broader social environment—its economic structure and dominant culture —on mental health. At the same time, American psychologists and psychiatrists, free from dogmatic adherence to any ideology, consider the observation that, in any social group, individuals are differently receptive to social influences as valid; that some do not accept altogether passively, and others even rebel against the dictates of society; that is, if they are allowed to express themselves.

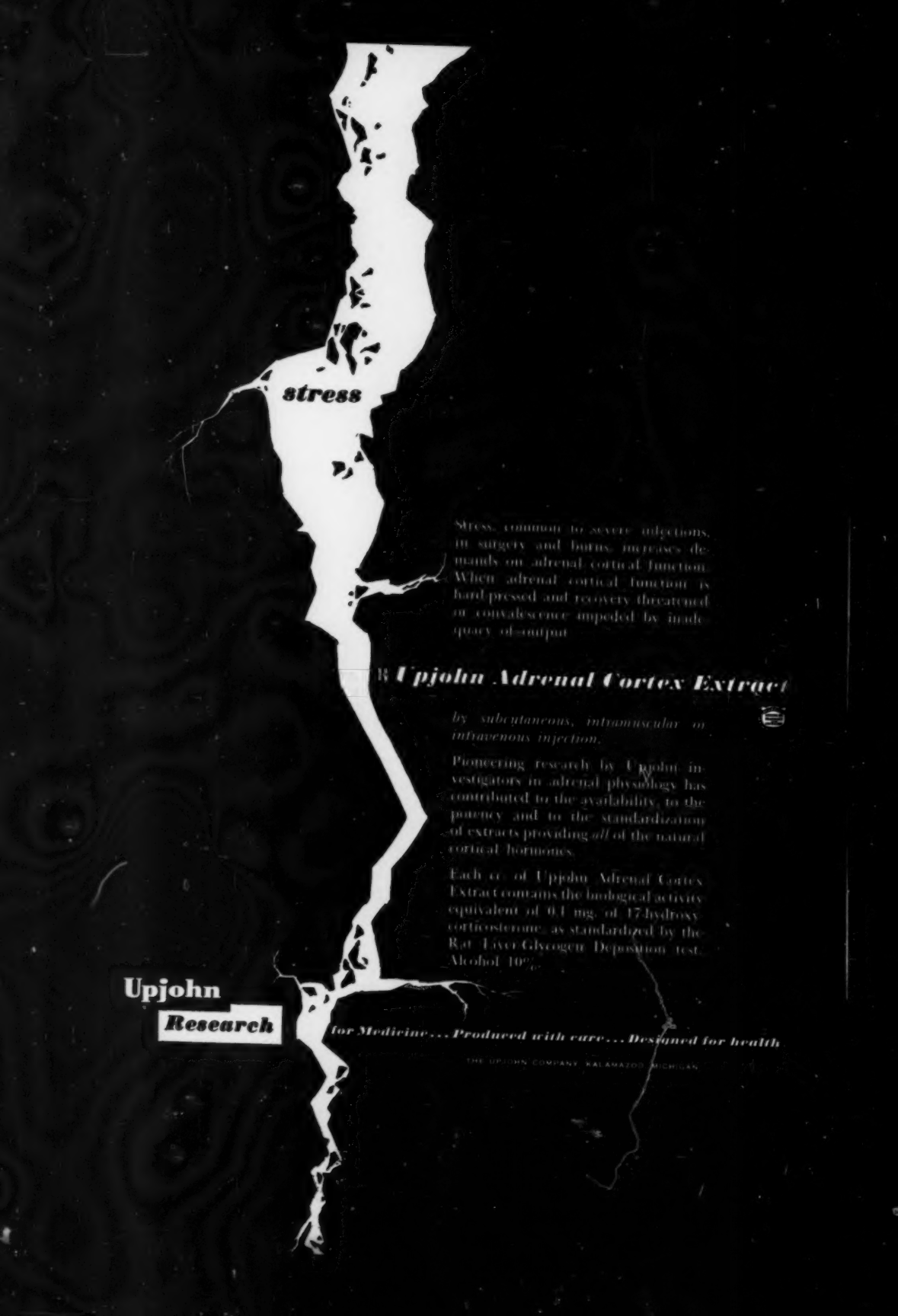
Thus, a realistic attitude, free from *a priori* concepts, leads one to conclude that personality function is determined not only by extraneous influences but also by forces within the individual.

3. *Treatment:* In harmony with the all-pervading materialism in all walks of life, including science, physiological therapies have been flourishing in the Soviet Union on a considerably larger scale than in the United States. These are: insulin therapy; convulsive therapy (electroshock, metrazol, camphor, and ammonium salts therapy); lobotomy; vitamin therapy; hemo-, physio-, and osmotherapy; administration of drugs into the cerebrospinal fluid; colloidoclastic shock; and x-ray therapy. Particular importance is attributed to work therapy. It includes an active work-program in the hospital and training of improved patients in new occupations, suitable to their mental and physical health and capacities.

Psychotherapy is based essentially on the recognition of the dominant role of conscious influences *versus* unconscious drives, which are relegated to insignificance. This, of course, tallies with the general acceptance that socio-economic factors primarily shape human feelings, thinking, and behavior, that emphasis on the psychodynamism of inner drives, of which the individual remains unaware, is only "one of the forms of bourgeois opposition to materialism."

Setting aside the commonly-used, stock-in-trade phraseology—"class struggle," "decaying bourgeoisie" psychology—the psychotherapeutic methods of Soviet psychotherapy are no different from those used in the United States and elsewhere by those who have a healthy respect for the role of the conscious in personality function.

The book is packed with information. The uninitiated but curious reader, the psychologist, psychiatrist, social worker, or educator, not versed in the Russian language, has an opportunity to get that information in a lucid presentation which makes interesting and pleasant reading.—*Solomon Katzenelbogen, M.D.*



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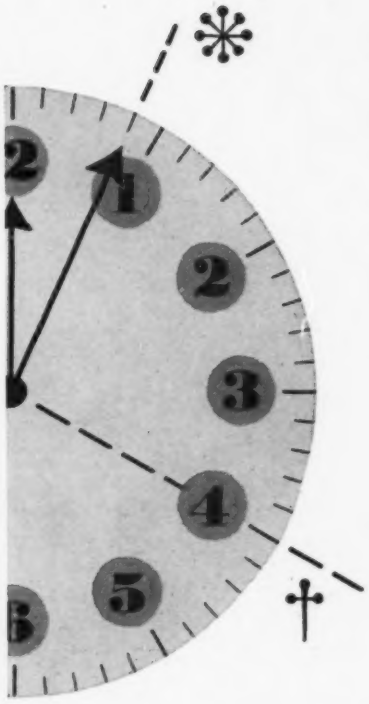

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